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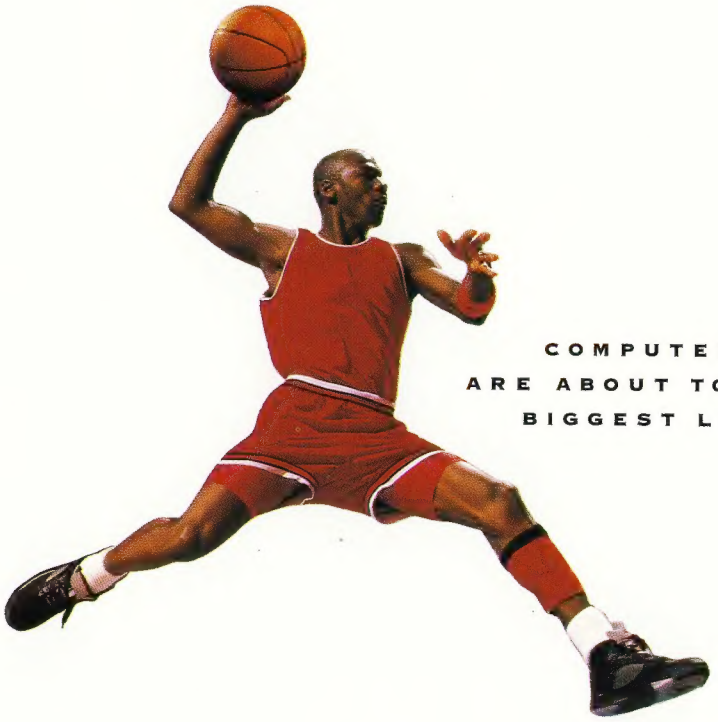

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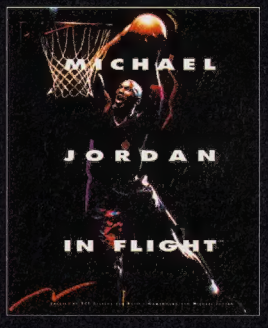

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COVER ILLUSTRATION BY LARRY SELMAN

CORRECTION: Media Vision's Pro AudioSpectrum 16 sound board has a digitzer sampling DAC resolution of 16 bits, not 8 bits as printed in the Table on p. 28 in the February/March 1993 issue. We regret the error.

EDITOR'S PAGE

IT'S NOT LATE, IT'S JUST DELAYED

Games are a business. Just like other companies, game publishers exist to make money, stay in business, and serve customers — in that order. Without the first reason, the second can't happen. Without the second, the third is impossible.

"Duh, right," you might say, but it's an important point to remember when you read this issue of *PCGames*. This month, Peter Olafson looks at low-cost and no-cost games, while Barry Brenesal offers some reasons why games are so rarely released on time. Both aspects of game creation are tied to the realities of the business world.

• **Late means layoffs — sometimes.** If a game publisher runs late on a product roll-out, it runs the risk of going out of business. Because nothing new to sell often means no cash coming in, the result of an overdue title can be disastrous for a "real" publisher. Recently, it was for Strategic Simulations Inc. Behind on its next-generation role-playing game Dark Sun, SSI laid off more than 20 percent of its staff in March.

A shareware game developer, though, can be as late as he or she wants, because there's relatively little at stake: no raging payroll monster to meet, no advertising budget to blow months before the game ships, no distribution deals to ink, no retailers to get angry as they put off their customers.

• **Big-time software means big-time risks — always.** Although Olafson says he'd stack the top shareware games against commercial titles any day, he also points out that even the best shareware game is more a follower than a leader. Leading-edge games take time, but, more importantly, they also take money. Top programming talent, professional writers and designers, video producers, and actors (whether for voice alone or for their mugs, too) cost plenty. So when a big-ticket game doesn't do as well as expected, companies suffer. Case in point: Sierra Online's downsizing this past spring, reportedly owing at least in part to the less-than-successful King's Quest VI.

Because shareware developers don't have the financial wherewithal to risk, they'll never match the size and scope of something like The 7th Guest or Ultima Underground or Commanche Maximum Overkill. What shareware creators risk instead is their single asset of note: time. When a shareware game bombs, it rarely costs more than the hours the developer spent on it. No wonder shareware is the refuge of hobbyists.

• **Originality means money, and money means commercial — almost always.** Original games are as rare as original movie scripts. In a world of knock-offs, new equals value: just the thing commercial developers are looking for. The unconventional game opens wallets.

Conversely, almost every shareware game maker lifts game concepts from existing titles, applies a bit of programming veneer, and rolls out yet another Tetris clone: a surprisingly *sharp* Tetris clone, but a clone nonetheless.

• **Games mean business.** No matter what their form, cheap imitation or matchless marvel, the one thing games — late or on time, high-priced or no-priced — have in common is a desire to entertain. That's their business. Some just make money while they do it.

— Gregg Keizer, Consulting Editor

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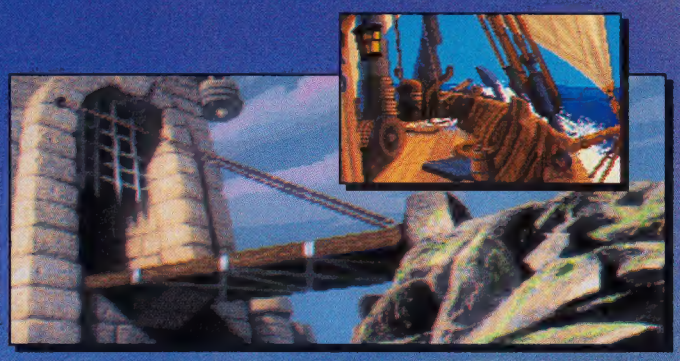

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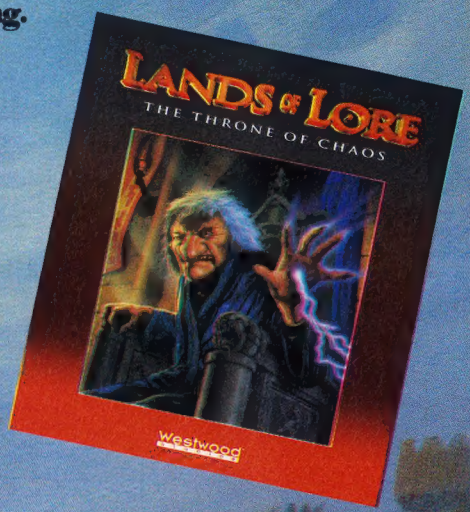

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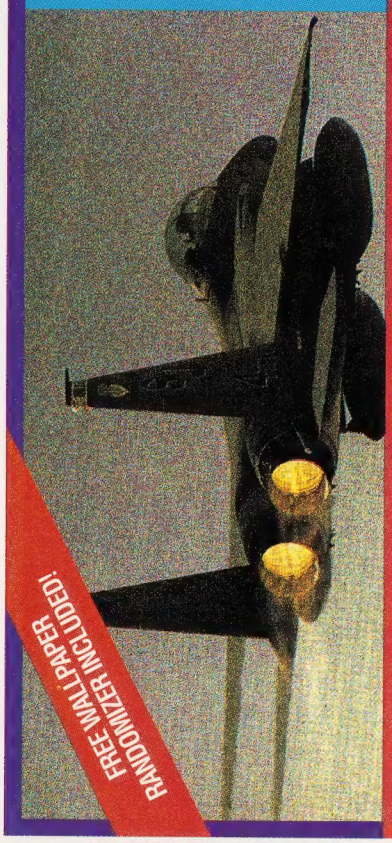

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LETTERS AND COMMENTS FROM OUR READERS

CENSORSHIP OR MARKETING?

I have to admit I was a little puzzled recently when I read that your article "Almighty Dollar" (Role Call, April/May 1993, p. 12) characterized our [Sir-Tech Software's] release of **Wizardry: Bane of the Cosmic Forge** for Radio Shack as an example of how big companies are censoring new software games.

We wanted to expand our sales to the family audiences catered to by the Radio Shack store chain. So we made the decision to edit two drawings that featured topless women. We felt the two drawings were tasteful and neither sexist nor offensive, but we recognized that many of our customers, families with young children and adults alike, might prefer the opportunity to purchase games at Radio Shack in keeping with the rest of the chain's offerings. We also continue selling the original, uncut version to our retail customers.

We don't see how offering customers a choice of two versions — one for an older and mature audience, and one for families and others — is an example of censorship. Families with young children should have the same right to buy suitable games for their children as network television does in editing feature films for general audiences or in scheduling more-mature programs at different times from children's shows.

That's not censorship — that's the reality of marketing. True censorship happens when a company cancels a product or changes it so dramatically that it is no longer true to the original.

I think you've missed the mark by holding up Tandy Corporation, Radio Shack, and computer-game manufacturers like us as examples of companies involved in censorship.

Norman A. Sirotek
President
Sir-Tech Software, Inc.
Ogdensburg, NY

THE RATINGS GAME

I'm a new subscriber to *PCGames*; I'm enjoying the magazine very much. I have one suggestion, though: At least once a year you should publish a list of ratings for all the games you've ever reviewed.

Dave Rich
Wheat Ridge, CO

We wish we had more space each month. We do publish "The Best of PCGames" every January, and we'll have the results of our "Readers' Choice Awards" contest in the August/September issue. Also, look for "Buyer's Guides" to selected games and hardware in upcoming issues, starting this fall. — eds.

If you have comments, questions, or suggestions, write and let us know what you're thinking. We reserve the right to edit letters for clarity, style, and space. Address your correspondence to Mailbag, PCGames, 80 Elm Street, Peterborough, NH 03458.

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By Wayne Kawamoto

BEAT THE HOUSE

You may not make a fortune like Trump himself, but Capstone's (Miami, FL) gambling simulation **Trump Castle 3** ($59.95) lets you take your best shot at blackjack, craps, slot machines, baccarat, roulette, and poker.

In this round, the third in Capstone's series of casino gambling games, Trump Castle features super-VGA graphics images along with modem and network play. That way, your colleagues and friends can play with you at the table.

Unfortunately, if you win big, your money is fictional. But, remember, if you lose your shirt, just reboot. Contact Capstone at (800) 468-7226 for more information.

MISSING LINKS

Today's golf games may be detailed — down to subtle changes in the turf beneath your feet — but, unfortunately, you can almost watch the grass grow during the screen redraws.

Konami (Buffalo Grove, IL) is introducing **Wilson ProStaff Golf** ($39.95), which promises to put an end to waiting around. The program sweats the details with ten side games, including shootout; best ball; skins; bingo, bango, bongo; and more. ProStaff also lets you choose your clubs and adjust your stance, aim, power level, and ball spin. For more information, call Konami at (708) 215-5111.

North Carolina's Pinehurst Resort and Country Club is the next **Links Championship Course** ($29.95) in Access' (Salt Lake City, UT) famous PC golf series. It's compatible with the company's Links and Links 386 Pro games and with Microsoft Golf, as well. You can contact Access at (800) 800-4880 for additional information.

To really get into the swing of things, Sports Sciences (Twinsburg, OH) is offering **Pro Swing System** ($299). This package features an actual shortened club that can mimic anything from a driver to a putter. When you swing it over a sensor, the device tells you the speed of your club and the distance and direction the ball would have gone.

And in what may be the ultimate PC golf game (for now), Sports Sciences collaborated with Access Software to create **The Country Club Golf Game** ($99). Hook up the Pro Swing System to your PC's serial port, and you can swing a club and "hit" the ball into the PC's scenery. The Country Club Golf Game also accepts Access' course disks for Links, Links 386 Pro, and Microsoft Golf. For details, call Sports Sciences at (216) 963-0642.

Pinehurst Links Championship

SPIN THAT DISC

How would you deal with your childhood now? Remember your tag-along kid sister or brother, your bossy teenaged siblings, and your parents, who didn't understand? Well, in last year's **The Adventures of Willie Beamish**, you could be a 10-year-old again, but without the hassles. This interactive adventure is now available on CD-ROM disc ($69.95) from Dynamix (Eugene, OR).

The enhancement includes sound effects and spoken dialogue (with a sound card). Now you can listen to Ms. Glass as she lectures her English class and hear what's on Willy's mind.

As the Beav might have put it, "Gee, Wally, this is swell." Call Dynamix at (209) 683-8989 for more information.

Software Sorcery (San Diego, CA) is releasing its high-tech naval-warfare simulation, **AEGIS: Guardian of the Fleet** ($89.95), on CD-ROM. This game promises to put you on the "front lines of modern history's greatest naval conflicts," letting you command warships in a strategic duel for dominance on the high seas. With some 100 missions, nighttime scenarios, tactical and strategic combat, 256-color super-VGA graphics, 3-D cinematic sequences, and digitized voice and sound effects, AEGIS promises to be a mental chess game of deception and intelligence. Call Software Sorcery at (619) 452-9901.

If the whiz kid of 18th-century Vienna is your favorite classical composer, then Ebook's (Union City, CA) **MPC Mozart: A Multimedia Musicbook** ($29.95) is for you. The program features historical essays, biographies, analysis, a glossary, and musical and biographical trivia, plus digitally mastered recordings, including *Symphony No. 40 in G Minor*.

Ebook's second MPC product is **Twelve Roads to Gettysburg** ($69.95). This CD-ROM program offers some 200 biographical sketches, numerous photographs, and hyperlinked text.

At the MOVIES

If you're into movies and don't always agree with television's dueling critics, Villa Crespo (Highland Park, IL) is releasing FLICKS! FILM REVIEW LIBRARY ($59.95). Flicks lists some 30,000 (that's 30 thousand, folks) movies, with information on cast, director, category, release year, MPAA rating, Academy Awards, and availability on tape and laser disc, plus a number of critical reviews.

If your home-movie collection is getting out of hand, Flicks! also offers a database to help track your videos. In addition, the program includes a trivia game for up to four players. (Quick, who wore the Darth Vader costume in Star Wars?) Now if only Flicks! could identify that strange yellow stuff that theatres put on their popcorn. (Answer: David Prowse. Darth Vader, not the popcorn.) Contact Villa Crespo Software at (708) 433-0500 for more information.

If you need some culture, Ebook offers **Impressionism and Its Sources** ($79.95), part of the company's Electronic Library of Art Series. The program presents some 1000 influential 20th-century paintings, including works by Manet, Monet, Renoir, and Van Gogh. It also includes biographical sketches and interactive essays on each artist for an informative brush with civilization. If you haven't played any good books lately, call Ebook at (510) 429-1331.

Electronic Arts (San Mateo, CA) announced recently that it will distribute CD-ROM titles from Sanctuary Woods Multimedia Corporation (Victoria, BC).

Upcoming products include **The Awesome Adventures of Victor, Vector, and Yondo**; **Shelly Duvall's It's a Bird's Life**; and **Hawaii High** ($59.95 each). For more information contact Electronic Arts at (415) 513-7555.

DON'T LEAVE HOME WITHOUT IT

If you're on the road and you're looking for gaming action, Epyx (Redwood City, CA) offers a collection of six Windows titles in **Getaway** ($39.95). This program is available in both standard and laptop versions.

First there's *Cascade*, in which you roll dice on a 5-by-6 grid and earn points by making "cascades" — straights or four of a kind. *Totem* is a logic puzzler set in the Pacific Northwest. *Stuffing the Briefcase* challenges you to pack a series of objects into an attaché. With 63 levels, the game re-creates your experience of packing to return from your vacation, but on the PC, you won't be able to jump on the suitcase.

Word Salad asks you to find hidden words in 32 levels. If travel and vinegar don't mix, there's the classic game *Dominoes*, with a tutorial and two variations — *Five-Up* and *Seven-One Spin*. Last is *Solitaire*. Getaway's version tells you when the game is over and further struggle is futile. For more information, call Epyx at (415) 368-3200.

ON THE HIGH SEAS

WITH THE WIND AT YOUR back and your nose to the PC, try Dolphin Marine Systems' (Downington, PA) brand-new **Dolphin Sailing Simulator III** ($69.95). In this title in the company's series of comprehensive and realistic sailing programs, you practice piloting 14- to 42-foot boats with eight types of sails and various crew positions, including *cockpit*, *navigator's station*, *lookout*, *foredeck*, and *tactician*, with 3-D views and graphics images.

Sail new seas with Harpoon Designers Series II.

Dolphin also offers voyage disks ($49.95 per coast) with additional topography, charts, weather, tides, and traffic, including **The Chesapeake Challenge**, **San Francisco Sailabout**, and **Vancouver Vacation**. (Notice there's no "Tsunami Times" or "Stormy Stations.") If you practice safe sailing, this is it. Before you go out in the waves and swim with the big fish, practice on the PC. For details contact Dolphin Marine Systems at (215) 269-6800 or (800) 367-3622.

Avast, ye mateys — MicroProse (Hunt Valley, MD) is releasing an updated, enhanced version of its seafaring classic with **Pirates! Gold** ($59.95). The original Sid Meier game was one of the best of its time, and the new version promises still more addictive and entertaining action with updated graphics images and sound effects. As in the original, you sail the Spanish Main as you do battle with other ships, practice your wordfighting, pillage coastal towns, and look for buried treasure. You might even get the big one — the Silver Train. Yo ho ho, it's a pirate's life for me. For details contact MicroProse at (800) 879-PLAY.

If modern warfare's your forte, look for expansion disks for SSI's (Sunnyvale, CA) **Great Naval Battles**, including a **Scenario Builder** ($39.95), **Super Ships of the Atlantic** ($29.95), and **America in the Atlantic** ($29.95). For details contact SSI at (408) 737-6800.

Three-Sixty Pacific (Campbell, CA) has announced **Harpoon Designers Series II** ($39.95). It comes with 12 new scenarios, a data annex (a guide to Harpoon's military bases, weapons, and sensors) and a tactical manual that deserves its title, *How to Win at Naval War*. For information contact Three-Sixty (409) 776-2187.

COOPERATIVE LEARNING

Maxis (Orinda, CA), creator of notable games such as SimCity, SimEarth, SimAnt, and significant sim-others, has announced that Davidson Software (Torrance, CA) will distribute its educational titles.

In other agreements, Davidson has acquired U.S. distribution rights to Europress' Fun School educational software (U.K.). This makes a total of six software companies on Davidson's affiliate-label program, including Creative Pursuits, Earthquest Inc., First Byte, and Lawrence Productions. Reach Davidson at (800) 545-7677.

NOW HEAR THIS

Exxis Technologies (Carrollton, TX) is introducing the **CD Revolution Multimedia Upgrade Kit** ($599), featuring a Philips/LMSI CD-ROM drive, SoundBlaster Pro card, self-amplified stereo speakers, headphones, and software, including Microsoft Windows; Software Toolworks' Multimedia Encyclopedia, U.S. Atlas, World Atlas, and Animals; Origin's Wing Commander and Ultima VI; and LucasArts' Loom.

If you want multimedia but are reluctant to perform surgery on your PC, Exxis will install your system for free. Bring your computer and kit to one of 280 authorized centers. Call Exxis at (800) 477-6278 for information.

Advanced Gravis (Burnaby, BC) has announced **UltraSound 3D** for the PC ($199), a 16-bit sound card that immerses you in an audio environment. Through a process called *convolution*, left and right binaural signals create a wrap-around effect, making music and sound seem "three-dimensional." For more information call Advanced Gravis at (604) 431-5020.

Logitech (Fremont, CA), makers of mice and scanners, has sealed an agreement with the audio-board manufacturer Media Vision. According to the contract, Logitech will begin incorporating Media Vision's multimedia technology into some of its new devices over the next few years. The first product of this arrangement is the **Logitech SoundMan 16** audio card ($289). In addition, part of Logitech's long-term strategy is "senseware," computer products that will appeal to sight, sound, and touch. Stay tuned. For details contact Logitech at (800) 231-7717.

COPS 'N' ROBBERS

After leaving the smoldering, riot-torn streets of Los Angeles (this is real life, unfortunately, not a computer game), former L.A.

Police Department Chief Daryl Gates will now design the upcoming **Police Quest IV** (price unavailable at press time) for Sierra Online (Coarsegold, CA).

Previous Police Quests were set in the small town of Lyton. But Gates' version will put players in present-day Los Angeles, as they try to piece together a series of seemingly random murders. As in earlier versions, the game will feature by-the-book police procedures and provide insight into the difficulties and dangers of solving a crime.

Also, undoubtedly drawing on Gates' personal experience, the game will feature harassment from the media. (All it needs now is bickering with the mayor of Los Angeles.) Gates says that the game will "give computer users the opportunity to see what it's like to be a cop in L.A." We'll see how Gates' version of living and dying in L.A. compares to the earlier Police Quests by Jim Walls. For details contact Sierra at (800) 326-6654.

DEJA VU (VUDA JAY?)

Icom Simulations (Wheeling, IL) is now offering **Déjà Vu I & II for Windows** ($59.95). In this one, you're framed for murder, but you have no idea who you are. What you do know is that the law and the mob are on your tail. You've got seven days to figure your way out of the mess and come up with the cash to save your face (and everything else). Dial Icom at (708) 520-4440 for more information.

OVER YOUR HEAD

If you're flying supersonic sims with a joystick yoke and pedals, the next thing on your wish list might be a virtual helmet. Onur 6 Enterprises (Aberdeen, MD) offers a **Flight Simulator Helmet/Headset** ($139), modeled on actual F-16 helmets. Connect the device to a phone jack, strap the helmet on, and start issuing commands and communicating through the phone lines. When you're playing with others via modem, this can be a great way to keep in touch (separate phone line required).

The helmet comes in your choice of silver or "stealth" black, clear or smoke tint on the visor, and an adhesive call sign. You'll be cursing the enemy in style — but don't shoot 'til you see the smoke tint of their visors. Contact Onur 6 Enterprises at (410) 272-1858.

FOR MICE AND MEN

Armchair General (Twin Falls, ID) wants to make your laptop a desktop with its **MousLounge** ($19.95) tray. If you type or play games with the keyboard on your lap, clamp this device to the side of your keyboard — it'll come in handy as a surface on which to move your mouse. (It comes with a fitted mouse pad.) It can also hold trackballs, joysticks, and various objects such as notepads and pencils. It'll free up valuable desk space while you're using your mouse to fly planes and destroy the enemy. For more information, contact Armchair General at (208) 733-0700.

ASK DR. FLOYD

MicroProse (Hunt Valley, MD) is introducing a new entertainment pack called **Dr. Floyd's Desktop Toys** ($39.95), featuring sixWindows games and Dr. Floyd himself, an Einstein type who pops up occasionally and pops off with some witticism or observation.

Titles include *Snark Hunt*, a matrix deduction game; *Cryptograms*, a deciphering game; *Kye*, a strategy maze game; *Web Spinners*, a logic puzzle; *Pentomino*, a strategy puzzle based on shapes; and *Wallop*, a variation of that arcade game in which you bop prairie dogs on the head as they come out of their holes.

The program features entertaining sound effects and music. If all this fun sounds too unproductive for the office, you can justify the program by using its appointment book to keep yourself on track. For more information contact MicroProse Software at (800) 879-PLAY.

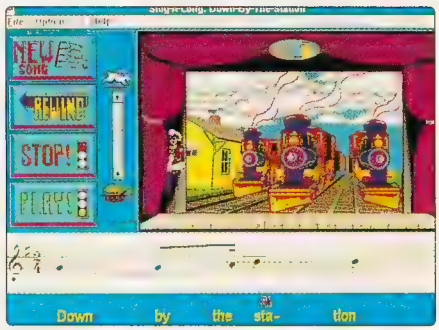
THE BIG ONE

V for Victory: Market Garden ($69.95), the third title in Three-Sixty Pacific's land-combat series, is set in 1944 Holland. You fend off German troops trying to capture four strategically important Rhine bridges. The program features new types of terrain, including dikes and polders, plus seven scenarios, sound effects, and modem play.

Three-Sixty also will distribute Colorado Computer Creations' (Colorado Springs, CO) **High Command** (price unavailable at press time). Available previously only through mail order, High Command is a strategic program set during World War II. The game lets you adjust Allied and Axis intelligence, the loyalty of unaligned countries, and the weather, as well as allocate limited resources, and conduct 16 types of missions, including amphibious assaults, armored blitzkriegs, and bombing campaigns. For more information contact Three-Sixty at (409) 776-2187.

A-ONE, A-TWO . . .

Disney Video doesn't have a lock on the sing-along market, you know. Dr. T's Music Software (Needham, MA) now offers multimedia music in **Dr. T's Sing-a-Long** ($59.95). This children's program combines lyrics, music, animation, and on-screen notation for 25 songs, including classics like *Row, Row, Row Your Boat* and *Down by the Station* and blockbusters (these nearly went platinum) such as *This Old Man* and *Three Blind Mice*. Dr. T also promises a CD-ROM version of Sing-a-Long, plus add-on disks with more songs and animation (prices unavailable at press time). Contact Dr. T at (617) 455-1454 for details. ❑



Your child can sing along with Dr. T and the classics.

IT'S NOT DEAD, JIM

Interplay Productions (Irvine, CA) has announced an eight-year multi-product, multi-platform agreement with Paramount Pictures to create a line of Star Trek products for PCs and Macintoshes, on CD-ROM, and on cartridge. Last year, the buying public snapped up more than 100,000 copies of Interplay's STAR TREK: 25TH ANNIVERSARY, and Interplay is betting that the public "canna help buying more, Captain." Contact Interplay at (800) 969-GAME for more information.

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By Bernie Yee

THREE-POINT LANDING

Role-playing developers are all doin' the 3-D shuffle.

Everybody's doin' 3-D. Designers of PC role-playing games, pushed and prodded by just a few innovative titles, are rushing to break ground in the third dimension.

Where's the trend coming from, and where's it going? Put on a pair of 3-D glasses, and follow along.

2-D SHEEP

It was Origin's **Ultima Underworld** that changed the way point-of-view role playing is presented. Lately, other games have laid claim to the Underworld 3-D crown, but for the most part, they're just pretenders to the throne. There's still a

big difference between a true 3-D game like Underworld or Dynamix's new **Riftwar: Betrayal of Krondor** and the pseudo-dimensional engines found in titles like **Wolfenstein 3D** and **Legends of Valour**, a recent package from SSI.

Wolfenstein 3D, its first installment available via shareware, owes its roots to a classic Apple II game called Castle Wolfenstein, an escape-the-fortress-crawling-with-Nazis game. Wolfenstein 3D puts you in a similar situation — alone, trapped in a fortress, with a pistol and a clip of bullets.

Wolfenstein 3D offers first-person perspective, much like Underworld, but the graphics images flicker by faster and more smoothly. The effect is intriguing, for the pictures alone create tension: You'll turn corners with trepidation, hoping a rabid SS officer isn't waiting there. Wolfenstein tosses in enough blood and gore for an Arnold flick, and its images, down to the Nazi flags and Hitler posters, fill you with appropriate revulsion. This isn't a role-playing game *per se*, but strictly arcade fun.

SSI's Legends of Valour looks like an even bigger improvement. Not only are the graphics sharper and the movement faster than Underworld's, but the game's universe is large and takes place both above and below ground. Its images resemble a more-detailed Wolfenstein 3D's. Though its pictures are impressive, the fact that Legends lets you explore the world outside its dungeons is a real plus. Graphically, it's a step in the right direction, though Legends' automapping system doesn't have Underworld's panache,

> Riftwar: Betrayal of Krondor immerses you in three-dimensional worlds above and below ground.

and game elements are almost nonexistent.

But neither Wolfenstein nor Legends sports *real* 3-D. Both game engines actually offer a finely tuned two-dimensional system. Unlike a traditional role-playing game, in which your party moves ten feet at a time and can make only right-angle turns (hence the term *10-foot wall set/90-degree turn engine*), in Wolfenstein 3D and Legends you can move any distance or turn at any angle in a single movement. But you *can't* move up or down, jump, or fly. All movement still takes place in two dimensions, not three.

They may be great looking, they may feature fast engines that provide the illusion of 3-D movement (while really working only in two), but they're just 2-D sheep in 3-D clothing.

At most, psuedo-dimensional engines like the ones found in Wolfenstein and Legends make the old 10-foot/90-degree turn cores obsolete. But real 3-D? Not quite.

THE REAL THING

So what's the next step in role-playing perspective? Well, it's not **Ultima Underworld II: Labyrinth of Worlds**. It may improve on its predecessor with enhanced wall images, increased image resolution, and digitized sound effects, but Underworld II remains graphically similar to its watershed prequel. In fact, the biggest improvement isn't in graphics at all, but in plot (though it still keeps you locked in a dungeon).

Dynamix's Riftwar: Betrayal of Krondor offers a peek at the future of 3-D. It uses a polygon and bit-mapped graphics system to create a true three-dimensional world that includes above-ground travels.

Krondor's polygons present a stunning approach to the 3-D experience, one that almost gives you the Holy Grail of role-playing games — a dungeon simulator.

Even further down the release road, look for Interplay's **StoneKeep**, a true 3-D game that might even let you use an airborne mouse for some virtual-reality-esque sword swinging. Now *that's* 3-D. ❑

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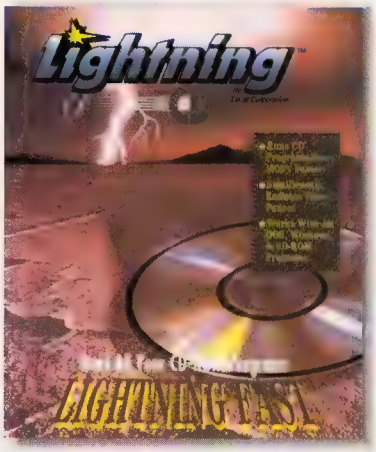

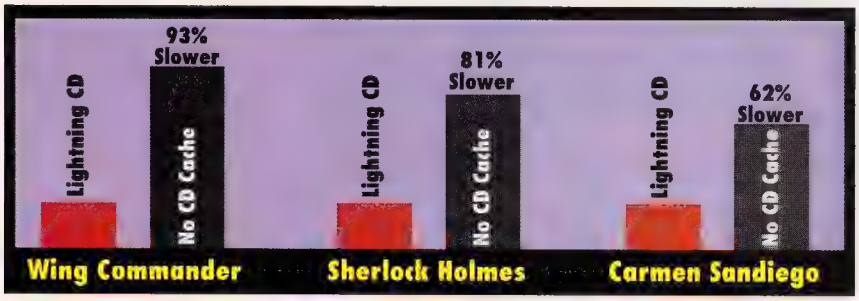

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Circle 98 on Reader Service Card.

By Cameron Crotty

CALLING ALL ACES AND JET JOCKEYS . . .

MAKE MY DAY

I'm mad as hell and
I'm not going to take it anymore.

If I have to figure out one more flight path, lay one more waypoint, or decide whether to fly parallel or perpendicular to one more Doppler wave radar emplacement, I'm going to grab a blunt instrument and start breaking people off at the knees.

It's all a question of degree. Just like a martini: Some people like a lot of vermouth, while others just want the bartender to *show* the Martini & Rossi to a chilled glass of gin. Some people want to just climb into the cockpit and fly, while others want to decide whether the bolts are left- or right-threaded.

Me, I'm somewhere in the middle. But I *am* getting sick of flight-sim programmers getting all the say in how they eat my CPU cycles.

IT'S MY COMPUTER

Sometimes, designers just get caught up in their projects and spend our precious computing power on charming bric-a-brac while overlooking mission-critical elements. Boy, that really steams my goggles.

Case in point. Dynamix's **Aces of the Pacific** is an absolutely beautiful sim. On a high-powered machine, its visuals can be stunning. Unfortunately, it's got some serious shortcomings. Even with said ultra-machine, the animation is still a little choppy, especially when you get more than five or six planes buzzing around. And though you can fly different kinds of planes, they don't *feel* all that different — except some of them explode faster than others.

So what do you get in exchange? A guy in the upper corner of your screen who tells you, via flag signals, that your carrier landing approach is screwed. To make it even worse, setting the aircraft down on the carrier by eye is No Big Deal. I don't need some bozo waving at me while I'm trying to bring in a flaming wreck with no engine. I don't mean to single out Dynamix for special persecution — despite the fact that I lambasted them for choppy graphics in a sneak preview of Aces last year. Each and every flight-sim maker has the same problem.

We appreciate the extra effort, but extra-thick chocolate icing doesn't make the cake. You still gotta have plenty of moist, quality pastry.

IF THEY ONLY HAD A BRAIN

While I'm on the subject, is there a law against shipping a hot-looking simulator with realistic scenarios (or, perish the thought, a coherent campaign) and some close-to-challenging enemy logic?

Aces of the Pacific: Stunning graphics screens, but are they worth the sacrifice in substance?

Visually, **Comanche Maximum Overkill** is breakthrough technology. You haven't flown a PC until you've climbed into the hot seat of this baby. Even without firing a shot, just cruising around at top speed through riverbeds and canyons is a ball. If you ignore the irritating arcade-style interface and weapons animation, you can almost believe you're in the real thing — almost.

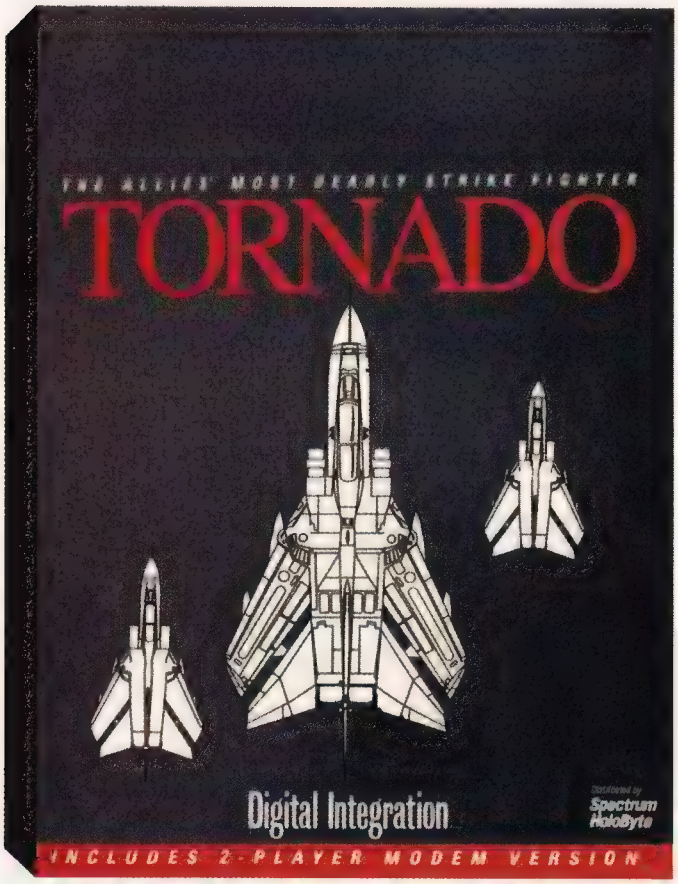
But the framework fails to live up to the filling. As a pilot, you're dropped into the middle of a hot zone with little or no rationale for being there. And once you're zipping around and wasting hostile machinery, the enemy plummets from the heights of strategic brilliance (they lured you into an incredible trap stacked with brutal odds, didn't they?) to the depths of tactical idiocy as one bonehead tank driver after another pokes his nose around a hill and volunteers for barbecue takeout, chopper style.

You want to hear something pathetic? I fired up **Hellcats of the Pacific** on my Mac. Boy, is it a beaut. You get to fly an F6F Hellcat against Hirohito's finest. The graphics images are strictly polygon and the overall look and feel is sparse, but after a couple of minutes of flight time, you could swear you're hauling several hundred pounds of metal around the sky.

Of course, you fly only one type of plane, there are just eight preset missions, your performance on one mission doesn't affect the others, and the Zero pilots couldn't fight their way out of a paper bag. I guess I should have known. ❑

ALL FLIGHT SIMS ARE NOT CREATED EQUAL.

Some Are More Real Than Others



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Circle 122 on Reader Service Card.

By Gregg Keizer

ONLY THE BEST

Steal this idea! Please!

When we steal software, they call it *piracy*. When developers steal ideas, they call it *innovation*.

Maybe that's not bad — not when it comes to kids' games, anyway. Creators of children's software could do a lot worse than lift technology from other kinds of games. It may be a bit light-fingered, like a nimble thief gently easing a wallet out of your back pocket, but it can boost kids' programs to a better plane.

Here's a Child's Play call for theft — uh, innovation — that'll bring education and "edutainment" software into the '90s.

POLYGONS AREN'T JUST FOR MATH

The first victim should be flight simulators, those games that mimic killing machines. The core of today's top-notch flight sims is a graphics system based on polygons — just like the ones you studied in junior-high math.

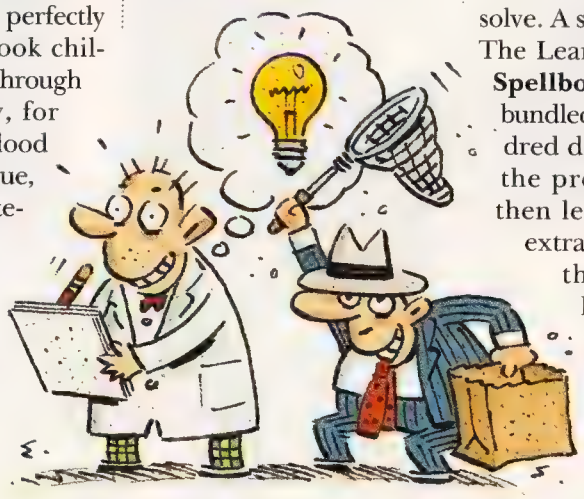
Using polygons, a flight sim builds a 3-D picture of both jet and jagged terrain. Because the programmer can manipulate polygons quickly — almost instantly on a high-powered 386- or 486-based PC — the images they create can twist and turn, rotate and revolve, with such speed that it's easy to suspend disbelief. Unlike bit-mapped graphics, in which every pixel is painted individually, polygons are just mathematical models to the computer. An imaginary jet can fly around mountains, show you a variety of views fast, and stream the scenery by quickly enough to create a sense of motion.

Children's games should abscond with polygons and put them to use teaching kids. They'd work perfectly in a game that took children on a voyage through the human body, for instance, where blood cells and brain tissue, antibodies and arterial walls are built from polygons. Using a flight-sim motif — kids could pilot a miniaturized remote drone through the circulatory system or along neural pathways — polygons could create a 3-D experience vastly more engaging than two-dimensional static screens.

FIRST-PERSON PUTS YOU THERE

Tag role-playing games as the second mark of thought thievery. The best thing about dungeon-crawl fantasies is first-person perspective, a look-through-the-eyes viewpoint that makes it seem as though you're peeking out from the protagonist's brain.

Most kids' games simply set up the screen as an external window on their worlds. In Broderbund's **Carmen Sandiego** series, for instance, you stare at a bunch of gadgets and a small frame that shows a scene from the land you're visiting. But because the frame isn't full-screen, there's no illusion of "being there." Ditto with **Mixed-Up Fairy Tales**, Sierra's cute role-playing game of discovery. Its view is from outside the child's character, just as the company's **King's Quest** series is.



Elwood Smith

Why not bring things up-close and personal? An undersea excursion with first-person point of view would put sharks, rays, groupers, and turtles no further away than a virtual scuba mask. A walk through a fantasy land populated with mathematics problems would become immediate, and more engaging, if you looked through the eyes of your imaginary character.

WE WANT MORE DISKS!

Even sports games offer a bundle of ideas to steal. Baseball, football, and car-racing games extend their lifespan with add-on disks packed with statistics from last year's season or this year's newest models. Kids' games could do the same.

The next Carmen-style geography game should come in engine form to allow add-on disks that would bump up the number of countries to visit or the number of cases to solve. A spelling game like The Learning Company's **Spellbound** could come bundled with several hundred digitized words for the program to speak, then let parents pop in extra disks to increase that number by hundreds more. A simulation like **SimLife** could drop new disks into your lap to turn an earth-bound genetics laboratory into something fit for an exobiologist studying life on a make-believe planet.

Kids deserve the best software we can give them, no less than what we use to while away late hours flying planes, dispatching monsters, or hitting home runs. Some plundering of other genres would help. Who said crime doesn't pay? ❑

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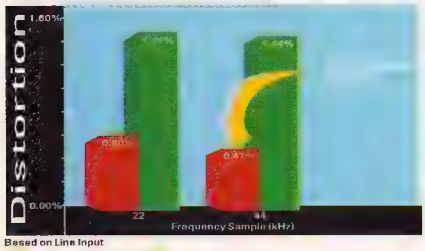

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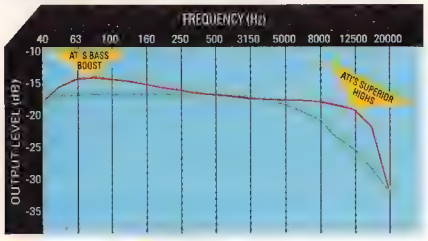
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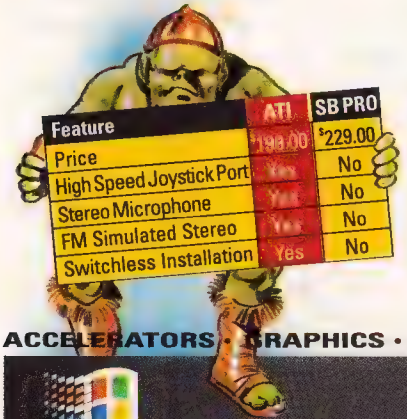

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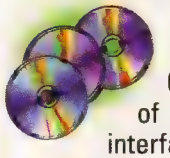

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Circle 22 on Reader Service Card.

PCG REVIEWS

JUNE/JULY REVIEWS

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Take a seat in the cockpit of a modern jet fighter. 8

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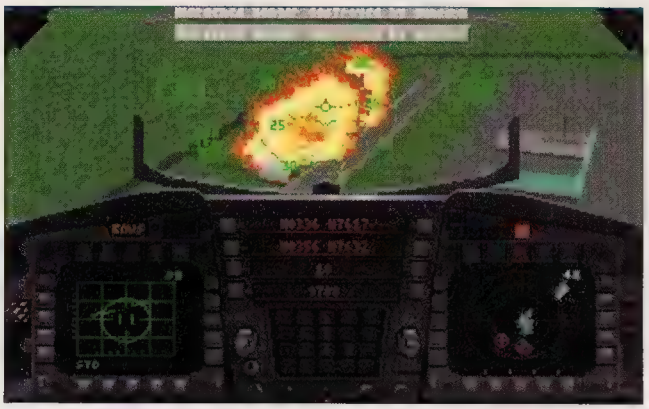
1 2 3 4 5 6 7 8 9 10

Games are rated (1 poor-10 great) on the basis of graphics and sound quality, playability, and ease of installation within their genres. Scores are listed at the end of each review and are recapped above, following descriptions.



From F-15 Strike Eagle III's high-tech cockpit you can engage your electronic weaponry.

F-15 STRIKE EAGLE III

By Ed Ferrell

The Mud Hen is one helluva plane. Fighting from practically down in the dirt, the F-15 Strike Eagle is capable of delivering a massive punch to ground targets. And because bogeys are inevitable, the Eagle possesses all the strengths of a first-class dogfighter. This two-seater has a range of more than 1000 miles, a maximum ceiling of 65,000, and a top speed of Mach 2.5. Like I said, one helluva plane.

In the tradition of its two predecessors, MicroProse's F-15 Strike Eagle III utilizes today's most powerful PC technology to put you in the cockpit of a modern jet fighter. You'll need to bring a hot computer to these missions, plus all the talents, reflexes, and composure demanded of a United States Air Force fighter pilot.

Stunning new visuals are the biggest change in this third-in-a-series flight sim. You'll fly in a 3-D world featuring enhanced terrain details, surrounded by new sounds and digitized cockpit speech. Although it still features a polygon-based environment, F-15 Strike Eagle III includes programming flourishes such as realistically cloudy skies that make flight a joyride. But this plane is too expensive for simple pleasure, so you have to accept a variety of missions to conclude a successful career as a jet jockey.

An accurate version of the Desert Storm operation comes in the form of an *Iraq Scenario*, in which you fly all four phases of the air war: disruption of air-defense and communications facilities, ground strikes against SAM sites and missile batteries, destruction of other ground targets, and, finally, the Great Scud Hunt. This scenario requires accurate bombing skills and precise, low-altitude flying. (Other missions put you in the skies over Korea or above the Panama Canal zone.)

Equipping your war bird is part of your job, and matching the right ordnance to the task at hand is as easy as pointing and clicking — provided you know which weapon to use. The F-15 can handle several types of air-to-ground and air-to-air bombs and missiles. The MK 20 Rockeye Cluster delivers more than 800 armor-piercing bomblets over a wide area — useful against parked aircraft, radar, and tanks — while heat-seeking Sidewinder or radar-guided Sparrow missiles take care of enemy jets. At times, though, discretion is the better part of valor; if your warning systems start blaring, it's time to drop chaff, deploy flares, and commence evasive action.

IFF, FRAG CUES, and TEWS are some of the electronic weaponry available in this high-tech cockpit. TEWS, the tactical-electronic-warfare system, detects radar emissions in time to warn you of incoming SAMs. You must weigh the importance of using this

equipment against the chance that it will give away your position.

If you don't have time for a full career or a single mission, *quick-start* mode puts you in the seat of an airborne Eagle with enemy planes on the horizon. Before you fight, you have to fly, and you may crash a few times before an enemy MiG shoots you down. Flying the jet in *realistic* mode isn't easy, but you can improve your chances by adjusting the level of authenticity brought to bear on actions such as landing and accurate enemy damage.

A joystick is a must for an accurate rendition of piloting a jet, but you can access many flight controls via the keypad. Just learning where everything is takes time. A walk through the well-written documentation helps, as do the available trial missions. It even pays to take the role of backseat officer (the weapons-systems officer, or WIZZO, who operates the aircraft's ordnance and defensive systems) for a few missions.

Friendlier than previous versions, F-15 Strike Eagle III lets you bring a friend along, literally. Two-player mode pits you against your fellow aces in head-to-head aerial combat over the modem lines. Live long and prosper as an ace, and you can make a name for yourself. Completing missions successfully advances your rank, and finishing missions in outstanding fashion earns you medals.

You may have to create a boot disk to free up enough RAM to run this simulation, and though most PCs don't have enough power to run anything but F-15, you won't have time for anything else anyway. This one's realistic enough to test your flight skills, but slick enough to be more fun than work. It's one helluva simulation.

1 2 3 4 5 6 7 8 9 10

MicroProse, 180 Lakefront Drive, Hunt Valley, MD 21030, (800) 879-7529, (410) 771-1151; IBM PC or compatible, 386 or faster, 2MB RAM with EMS; VGA; supports AdLib, Pro AudioSpectrum, Roland, SoundBlaster; requires hard-disk drive; $79.95

Keeping one eye on the horizon — and both hands on the joystick.

MICHAEL JORDAN IN FLIGHT

By Wayne Kawamoto

When Michael Jordan holds court on the PC, it's off the joystick, off the mouse, off the CPU, off the backboard, and into the net. Electronic Arts' long-awaited Michael Jordan In Flight is a technical *tour de force* that blends flight-simulator graphics with arcade basketball action.

Amid the hoopla and the hoops, In Flight offers the best basketball simulation so far. All the players are digitized imitations of the real thing. In Flight's creators videotaped Jordan and other players against a screen as they ran, jumped, and shot in eight directions, then integrated those images into the 3-D playing court.

Throughout In Flight, your perspective is from right behind your player, as though you're sticking to him like a shadow on the court. This perspective departs from the traditional basketball game view, which uses a fixed isometric viewpoint from either half court or behind the key. Combined with In Flight's graphics images, the look is amazing — the screen view adjusts to any angle while maintaining the correct perspective for objects and players.

Michael Jordan In Flight's replay camera lets you review and save your greatest moments.

Commands are simple. Press button 1 (joystick or mouse) to pass or request a pass on offense and to steal on defense. Press button 2 to shoot or block a shot or snag a rebound. Select a direction to run or dribble the ball.

Still, control is awkward at times. It's tough to stop or move backwards, something that makes positioning yourself defensively and maintaining an eye on the action difficult. Your teammates may play a man-to-man defense, but the best you'll be able to do is play a convoluted blend of man-to-man and zone.

Control is less of a problem on offense, as you're usually driving forward and toward the basket. Even then, it's hard to judge distance, particularly when you're going for a rebound. Despite these problems, though, In Flight is high-level playoff material.

Play is all three-on-three. This optimal combination allows for both individual grandstanding and teamwork. More than three players per team would crowd the key and put the game over the difficulty edge.

To portray teamwork, In Flight offers four plays: low- and high-post cuts, give 'n' go, and back-door screen. You can choose to stick with Jordan or run the player closest to the ball. Playing the latter is old hat and leaves you feeling that you're not in complete control. In this mode, you can't call the program's plays, and you sometimes switch players in midstride, depending on your distance to the ball. Lack of plays in this mode is particularly disappointing — it would have been fun to switch positions and handle the ball through an entire play. In all, controlling Jordan is more satisfying.

As Jordan, you dominate the game and call the shots. You'll also find out that you can't play without rules. In Flight recognizes fouls, charging in particular, to keep the game clean.

In Flight features a *tournament* mode in which the program plays other games in the background while you play yours. If you have what it takes, you can beat the cut and make your way to the top. You can play single exhibition games, too; In Flight tracks statistics for teams and individual players.

Other nice touches include player substitutions. When you make a great shot, Jordan appears on screen to tell you so; when you blow it, he looks to the heavens in exasperation. The program also has a replay camera that lets you view the past bucket from a variety of camera angles.

The game's graphics images shine in super-VGA. In plain VGA, though, the players are blocky. When several of them come together, it's an unidentifiable mass of heaving pixels. (The game supports only a limited number of specific SVGA boards.)

Michael Jordan In Flight does PC basketball better than any game and clearly marks the next generation of PC hoops.

Electronic Arts, 1450 Fashion Island Blvd., San Mateo, CA 94404, (415) 571-7171; IBM PC or compatible, 16MHz 386 or faster, 33MHz 486 or faster recommended, DOS 3.3 or later, 2MB RAM, 560K free in lower RAM, 1MB EMS memory, 4MB recommended; VGA video card with 512K RAM, extended VGA card with 1MB recommended; supports AdLib, Pro AudioSpectrum 16, Roland MT-32, SoundBlaster, SoundBlaster Pro, SoundBlaster recommended; requires hard drive, 3.5MB free space, mouse or joystick, mouse recommended; $59.95

BUZZ ALDRIN'S RACE INTO SPACE

By Gregg Keizer

"Houston, we're going down. We've lost thrust, and we're going down. Impact in 15 seconds."

Though never uttered by moon-bound astronauts in the real world — thank goodness — the words are still chilling, even when you imagine them during Interplay's Buzz Aldrin's Race Into Space, a new simulation that tracks the U.S.A./U.S.S.R. battle for space supremacy.

Build a space program one piece at a time in Buzz Aldrin's Race Into Space.

You can't count Buzz Aldrin's Race Into Space as strictly a game, nor is it an educational program fit only for the classroom. Instead, it squeezes into the narrow niche dominated by titles like SimCity — simulations that manage to teach as they entertain.

Like SimCity and its ilk, Buzz is really about managing resources. Money is finite, and one of your chores is to spread it around judiciously, funding one program over another, "buying" astronauts, or developing necessary space hardware. But time is the real resource here and, in the end, the enemy, too. Take the title of this simulation seriously: It really is a race. The first to get into space, the first to pop a man outside his capsule for a stroll through the vacuum, the first to put a man on the moon and bring him home alive — these are the goals.

You can play either superpower, but it matters little whether you take the reins of NASA or the Soviets' space agency. What does matter is that your Cold War opponent will be pushing the envelope if you dither.

Using a graphics-heavy interface that relies on point-and-click, Buzz asks you to make the rounds of a burgeoning space complex. Buildings in the complex represent various elements of your space program, from research and development and astronaut training to the launch towers themselves. Click on a building, and additional screens appear to guide you through the decision-making process.

And you've got lots of decisions to make. In fact, if there's a criticism you can level at this sim, it's that there's an awful lot to remember, then do, during each six-month turn. Should you spend more money and time improving the safety of the Titan booster? Or toss funds at a new corps of astronauts instead? Should you build a shuttle-style ship, or just skip it?

Risk management is central to space operations, both in reality and in this simulation. The likelihood of a successful mission depends, in large part, on how safe everything is. You can bump up this level with additional research and development, but when you're pressed for time, you can take a chance. When the opposition is leading the way, it's tempting to toss caution to the winds — but dangerous, too, as you'll discover quickly when rockets blow up on the pad and astronauts end up in Arlington National Cemetery, not in a ticker-tape parade.

Because Buzz is a true simulation, you can follow history or play innumerable "what if" games. You don't have to follow the traditional path to the moon, the Mercury/Gemini/Apollo program sequence. You can, if you want, lie low at first and build a two-man spaceship right off the bat, frantically spending money on the lunar program while letting the enemy hog the limelight with a bunch of orbital firsts.

FIVE, FOUR, THREE . . .

To liven things up, Buzz Aldrin's Race into Space depends on first-rate sound effects and, for a non-CD title, some intriguing limited-motion video. It may seem hokey, but watching a liftoff on the simulation's command-center monitors is worth a few chewed fingernails. There's nothing like a successful launch of a long-delayed project to boost your spirits (and your fortunes — you're rated throughout by the politicians, who, of course, hold the all the purse strings).

Buzz Aldrin's Race Into Space may not find the mass audience of a SimCity — space shots rarely rate much coverage today — but it's a history lesson impossible to duplicate in print, on film, or in a board game. This one-of-a-kind simulation deserves attention. It deserves a home on your PC. You may not beat the Russians to the moon, but you'll have a blast coming in second.

Interplay Productions, 17922 Fitch Avenue, Irvine, CA 922714, (714) 553-6678; IBM PC or compatible; additional requirements not set at press time; $69.95

WORLD CIRCUIT: THE GRAND PRIX SIMULATION

By Jim Bail

Sometimes the PC comes in second. While Amiga game players reveled in the thrills and spills of World Circuit: The Grand Prix Simulation, PC owners could only look on in envy. Not any longer. We may be second, but the wait was worth it. The PC version of this driving simulation is simply the best racing game ever. Period. End of story.

CRUTCHES AT 200 MPH

In World Circuit you'll encounter and have to overcome a brief learning curve before you master physical control of the car and manage to keep it on the road. After that, though, you face the real challenge of racing — winning. Driving a car in World Circuit is easy; racing competitively on its 16 Grand Prix tracks is anything but.

After picking your driver — you select from among a pool of 35, formed into 18 real-life teams — you can start your quest for king of the road. To aid beginning drivers, World Circuit offers six options you can toggle on and off. Of these, two are most important. The "ideal line" — a striped white line on the track that leads you to the most-efficient racing line — and the suggested gear mode are fast ways to competitive racing on any new course.

Other aids that make life in the driver's seat easier include an indestructible mode, automatic gear shifting, automatic braking, and self-correcting spin control. As you improve, you can shed these crutches to ultimately race on your own merit.

But driving your car is only half of World Circuit. If you want to end up in the winner's circle, you also must pay considerable attention to tuning your car to the specific track. In the pits, you can adjust front and rear wing angles for maximum grip

LEGENDS of FANTASY

LITERATURE

PRAISE A LEGENDARY NEW GAME

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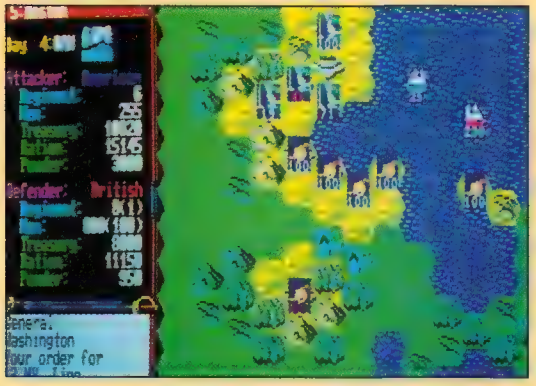
LIBERTY OR DEATH

By Barry Brenesal

Liberty or Death isn't about war, it's about revolution. Seen from the vantage point of the commanders in the field, this simulation of our war of independence may be short on tactical details, but it's long on strategic planning.

Koei's Liberty or Death steers clear of the issues that pushed England and the Colonies to war and concentrates instead on resource management. You won't learn much about the causes of the revolution or even fascinating facts about Thomas Jefferson. If you want background, read a good history book. If you want to have fun, check out this simulation.



Liberty or Death is short on tactical details, but long on strategic planning.

Each Liberty or Death commander — from general down to captain — is faced with an identical perplexing challenge: too much to do, too little time. He can perform only so many tasks per month, at a heavy cost to his available energy. What will it be?

Should he drill his troops or draft new soldiers? Or maybe reform existing units, some of which are looking pretty sour? Maybe a furlough's in order. A better idea might be to bribe the local militia and convince them to join the regular army. Speaking of bribes, shouldn't he give some pocket change to a few of his subordinates? They're a little mutinous these days. You would be, too, if you hadn't been paid in six months.

And how about some boats for fast coastal travel, a few more forts, and shelter for the men sleeping out in the open? Just thinking about it all can exhaust you.

Most of your officers in Liberty or Death are made of sterner stuff. Commanders on both sides are rated according to six characteristics. "Leadership" directly affects the way an officer's troops perform during battle. "Tactics" are sheer cunning — a commander with a high tactical rating makes a better spy, for instance. And "Discipline" is the difference between success and failure. An officer with a "Tactics: 90, Discipline: 30" rating may be shrewd, but he'll probably drool a lot and bore the troops.

"Loyalty" determines the likelihood of desertion, and "Reputation" affects success in such matters as raising local support. "Body" notes an officer's physical ability to perform tasks, which naturally declines with exertion, increases with rest.

You don't have to play every district commander. You can tell the computer to run some of the districts you control for as long as you'd like. But you can't escape the responsibilities of commander-in-chief, the one role you have to assume personally. Liberty or Death gives you a trio of officers on each side to choose from (including George Washington). Your C-in-C not only directs the overall military operation, but also answers to the government, which can give him a vote of confidence or even sack him.

Battles are displayed on Koei's standard hexagonal field, where terrain is divided into 11 types (including forests, towns, and bridges) and units are separated into six styles. Don't bother looking for the latest in computerized combat sophistication, though. This is symbolic warfare more akin to chess, with simple options on a small playing field.

DO A BENEDICT ARNOLD

A degree of realistic detail is sacrificed throughout Liberty or Death, so that the game remains challenging, but lively in its various levels. Still, Koei's done its homework, for the general character of the war comes through. It rates the British, for instance, as superior in training, money, and supplies at first. A couple of their generals may be the best of either side (and their stats show it), but the majority are extremely poor and rather demoralized.

More authentic still is the way Liberty or Death captures the confused hierarchy of the American militia. Without any preexisting command structure, Revolutionary officers wrangled continually over pay, precedence, and troop control. Local forces may join the Continental Army or resign from it at any time if morale is low. Those nursing a grudge, rightly or wrongly, even can desert to the Tories, as did Benedict Arnold. Trying to keep them all in line is like herding a bunch of cats.

There's fun in Liberty or Death — more so than the real thing — with no two games alike. If you enjoy strategic simulations, get out your musket rifle and powder flask, then pick up Koei's latest. You won't be disappointed.

Koei, 1350 Bayshore Highway, Burlingame, CA 94010, (415) 348-0200; IBM PC or compatible, DOS 2.0 or later, 640K RAM; EGA, VGA; supports AdLib, SoundBlaster; requires hard-disk drive, 2MB free space; $59.95

Get behind the wheel in World Circuit.

versus minimum drag, braking bias between front and rear wheels, and gearing for maximum speed and tight ratios. Tire choices range from very soft compounds to hard, the trade-off being longer wear versus tighter grip. You can even put on "wets" — tires with tread for maximum grip on wet courses — during rainy races.

GEAR UP

When you select a race, you go through the same process as do the professionals before starting time. Beginning with pre-qualifying practice, you tune your car by setting wings and experimenting with different gear ratios. Find a good balance quickly, because this session is timed and you're better off practicing with the setup you'll use when it comes time to qualify.

During qualifying, you push your car in pursuit of the pole position. As you get ready in the pits, an information board relays critical information, such as current times, starting placements, and number of cars out on the track. All this helps you decide when to pull out and begin your run or whether you need to retune your car to pick up an extra half second.

With qualifying over, you can use the pre-race practice session to retrim your fuel-laden car for the race. If everything's gone well, you're somewhere near the front of the starting grid come race day. (Starting up front is an advantage because of the inevitable jams that occur further back in the pack.)

As you start, take it easy; let your

cold tires warm up and let the race flow. At first, the track will be congested and you'll have to drive a thin line between gaining position early and risking an accident. The frustration that professional Grand Prix drivers experience when they wipe out early on will become all too real if you don't approach the early laps with lots of respect.

Once you're under way, aggressiveness and smoothness are the orders of the day. Overtaking opponents follows a strategic chain of events; you need to know where you can pass safely and then set it all up. The trick is to drive your own race — bide your time, look for an opening, then exploit it. Patience is indeed a virtue in World Circuit. You're only so much digital metal flying apart when you enter a turn on the wrong line and with too much speed.

Winning doesn't come easily in World Circuit: The Grand Prix Simulation. Practice, persistence, and the proper approach can put you in the running, but there are never any guarantees.

THIS ISN'T YOUR FATHER'S OLDSMOBILE

Considering the amount of graphics manipulation going on in World Circuit, it's no surprise that the faster the PC, the more you'll enjoy this simulation. Although you can race on a 286, you'll be much happier with at least a 386/25; the smoothness and speed of World Circuit's animation is much more satisfying. You can adjust the level of scenery detail and turn off track texture to accommodate slower machines. On a 486, you can race with all scenery detail, with no noticeable slowness.

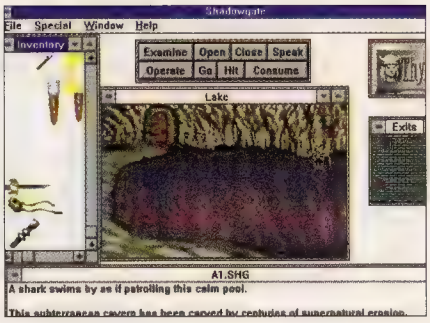
Control options include keyboard, mouse, and joystick, but if you can get your hands on a steering yoke, do it. (I borrowed a Virtual Pilot control yoke to review World Circuit, and I've all but decided to get my own.) The software supports AdLib, SoundBlaster, and Roland sound boards; at max volume, this game comes alive.

World Circuit is certainly more simulation than game. After racing on the PC, you'll gain insights into the "game" of Grand Prix driving that are impossible to imagine otherwise. The art of braking, down-shifting, driving the proper line, accelerating out of a bend at just the right time, and staying out of trouble will become real and stop being just fantasy.

World Circuit: The Grand Prix Simulation is tops in a crowded field. If you want to drive fast without seeing blue lights in your rear-view mirror, this simulation's the ticket.

1 2 3 4 5 6 7 8 **9** 10

MicroProse, 180 Lakefront Drive, Hunt Valley, MD 21030, (800) 879-7529, (410) 771-1151; IBM PC or compatible, 286 or faster, DOS 5.0 or later, 1MB RAM; VGA, MCGA; supports AdLib, Roland, SoundBlaster; requires hard-disk drive or joystick; steering yoke recommended; $59.95



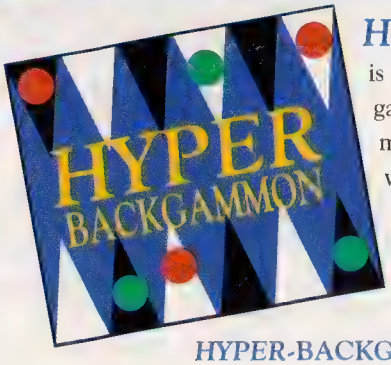
Getting past the hungry shark isn't nearly as tough as seeing the dinky key in the skeleton's hand.

SHADOWGATE FOR WINDOWS

By Mark E. Reynolds

Oh no — the evil Warlock has taken over the Castle Shadowgate and is hard at work raising the great Behemoth. Oh no — the Behemoth will destroy the world. Oh no — you're the only one who can enter the castle gates and foil the villain's plans.

Not Just Another Roll Of The Dice



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ROMTIME

System Requirements: •PC or PS/2 compatible computer, •CD-ROM drive that supports the ISO-9660 standard, with interface card, cable, and software, •minimum 640K of RAM with 400K available, •DOS 3.1 or later, •VGA card and VGA color monitor.

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(Hey, I'm not making this up.) Oh no — it's another fantasy adventure game with the same old plot.

Shadowgate's story may be more worn than the carpet in a Motel 6, but at least it's familiar. Take one fantasy adventurer (you), add an awesomely powerful evildoer (the Bad Guy), mix in the end of the world. We may not walk into these digital horror-fests looking for a fresh story line, but we do expect to find a new world of clever and creative puzzles to keep us entertained.

That's where this new Windows-based version of Shadowgate fails us. Sure, it's challenging. Sure, it offers point-of-view graphics images, a slick graphics interface (of course), and a wealth of difficult and complicated puzzles. But Shadowgate ultimately falls victim to a siren call that's ensnared many a PC game since super-VGA, high-resolution graphics images, and digitized sound took hold. Too often what we get is a paint job of dazzling graphics and audio effects slapped on top of a rusty mental exercise that's really no different from those monochrome, text-based adventures of a decade ago. Oh no.

ALL DRESSED UP

Because Shadowgate runs under Windows, you might expect something out of the ordinary. Shadowgate certainly looks impressive. But once you've been through a few dark rooms and hallways and faced a few foes, you realize you haven't entered an unfamiliar world after all.

The game's puzzles, though difficult enough to satisfy the most demanding player, often require more trial-and-error persistence than careful logic. That simply makes the challenge more frustrating than fun, particularly for beginning adventurers, who might conceivably be attracted to a Windows-based game like this.

You'll find a flute in your travels, for instance, but it reveals a hole in a tree only when you play it while standing in the right spot. If you play the flute for more logical reasons instead — say, to influence a magic rope or to soothe any of the savage beasts you'll encounter (sounds reasonable, doesn't it?) — you get nowhere.

Perhaps the most frustrating — no, it's nearly impossible — task occurs early in the game as you encounter a skeleton sitting in a shark-infested subterranean lake. (I won't tell you how to get to him, although that's difficult enough, but I will tell you what you have to do once you get there.) The skeleton has a key in his upheld hand. If you examine him, you get a dumb joke, but no clue to the key. Look really carefully, and you just might see it. It's there, but because it's both very small and not plainly visible against the background, it's almost impossible to spot. Even then, you've got to click on it with pinpoint accuracy to grab it. That's simply too difficult to be fair — akin to a PC video-poker game cheating you on a full house.

Beware of red herrings, too — Shadowgate's full of them. You'll die a thousand deaths trying to grab certain items or get to certain passageways you can see but not reach. Then when you finally make it, they turn out to be just decoys. That's fair, right?

BUT WAIT, THERE'S MORE

Shadowgate isn't a great adventure, but it *is* a good one. Even though the plot is nothing new and its puzzles too often demand persistence rather than thought, the game is visually fun. It's elaborate and challenging enough to keep you engaged for hours. If you like matching wits with the programmer and trying to follow the demented course he's laid out for you, you'll love Shadowgate.

And the adventure does demonstrate some nice attention to detail. You can actually open and read many of the books in the castle's library; some may even contain information you'll find helpful (provided your torch doesn't flicker out at the wrong moment).

If you're a devoted Windows fan and you're looking for a new game to run under your favorite interface, Shadowgate's just the thing. For the rest of us, its pretty paint can't disguise an old machine underneath.

1 2 3 4 5 **6** 7 8 9 10

Icom Simulations, 648 Wheeling Road, Wheeling, IL 60090-9981, (708) 520-4440; IBM PC or compatible, 286 or faster, Windows 3.1 or later, DOS 3.3 or later, 4MB RAM; SVGA; supports Windows-compatible sound boards; requires hard-disk drive, 8MB free space, mouse; $39.95

CONTRAPTION ZACK

By Lafe Low

The first day on the job is never easy. There's always the worry of what to wear, what to say, what to do. You have bigger problems than that, though, when you take on the job of repairman at Gadgetco, Inc. You'd better hit the ground running, because Gadgetco is falling apart at the seams. Fortunately, Contraption Zack — a puzzle game especially for the methodical, the detail oriented, the exceedingly patient — holds together tighter than Gadgetco.

Gadgetco is a thriving concern, or at least it was until it started to self-destruct. The factory is an enormous maze of interconnected rooms and levels you must traverse somehow. But moving through the company is a nightmare. An array of launch pads, gates, conveyor belts, and elevators may, or may not, get you where you want to go when you want to go there. Ride the wrong elevator at the wrong time or let yourself get plopped across a chasm by a launch pad, and you'll be there until the factory closes.

Doing things in the proper sequence is therefore your prime concern at Gadgetco. Getting around a seemingly insignificant obstacle may involve going back through three previous rooms to get to the next. It's kind of like going up into the attic to turn on the kitchen light, going out to the garage to get a glass, going down

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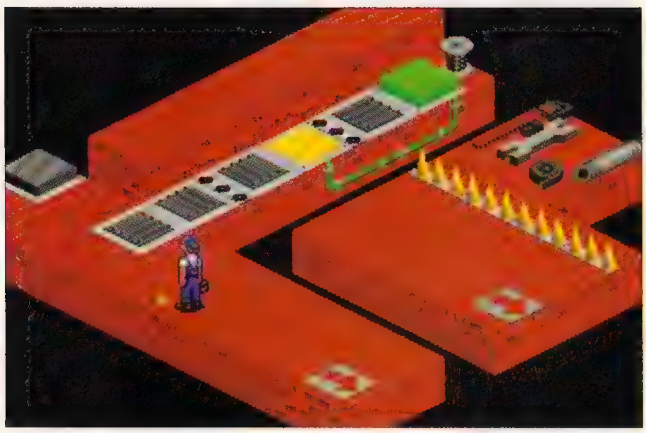
to the basement to turn on the water, then going into the kitchen to pour the water in the glass. Confused yet?

CLIMBING THE CORPORATE LADDER

There's no easy path in Gadgetco. Every room is a circuitous route through a variety of psychotically designed gates and passages. If the Industrial Revolution was anything like this, it's a miracle we got out of the Steam Age.



Finding your tools is only half the battle in Contraption Zack — getting to them is the hard part.

From the moment you leave Gadgetco's reception area, you've got to start pushing buttons, setting switches, and making repairs. There's no room for a learning curve here. You'll have to jump right in with both hands and feet (and any tools you manage to find).

To get through each room in Gadgetco's bizarre mechanical puzzle, you'll have to acclimate yourself to the way business works at the company. Each button you push changes the position of a never-ending array of timing spikes, which control where you can and can't go. Think of the buttons as keys to gates and you'll make progress.

To make your way through one room, for instance, you'll have to press a yellow button to lower the yellow timing spikes, then move through a timed gate to press a purple button and a green button to lower the purple and green spikes. Then hustle on out of there, because the yellow spikes are going to reset themselves and block your way. You have to think fast and move even faster in Contraption Zack.

TOOLS AND TALENT

As with any new job, Zack's occupation will take some getting used to. Many of the switches do something you want; many do something you don't want. The order in which you flick switches, turn levers, and move about determines your success or failure and your level of frustration.

You don't have to depend on your bare hands, though. You have tools at your disposal, and you'll need them. It's unfortunate, though, that your predecessor left them strewn across the factory.

When you move to a new level, you must refill your toolbox with the things you'll need for that level. As you move through the factory, you'll need newer and more elaborate tools to repair the "mishaps" you inevitably encounter. To repair a maladjusted hex nut, a loose screw, or a leaky pipe, simply walk up to the problem area with the proper tools and the problem's solved. When you try to repair something for which you have no tool, the toolbox flashes. That's the starting signal for yet another tool hunt.

Contraption Zack is no simple stroll through a magical maze of machinery, nor is it a rapid-fire, reflex-testing series of levels with increasingly difficult hazards. While many of the rooms in Gadgetco require some adroit maneuvering and quick thinking, the focus is definitely on strategy. Plan on needing plenty of patience if you hope to succeed.

Contraption Zack makes a real first day on the job look like a no-brainer. This is one messed-up factory — and one engaging puzzle.

1 2 3 4 5 6 **7** 8 9 10

Mindscape, 60 Leveroni Court, Novato, CA 94949, (415) 883-3000; IBM PC or compatible, 16MHz 286 or faster, DOS 3.3 or later, 640K RAM; VGA, MCGA; supports AdLib, Roland, SoundBlaster; requires hard-disk drive, 3MB free space, joystick recommended; $39.95

HARRIER ASSAULT

By Ed Ferrell

Just like the aircraft it's based on, Harrier Assault is a hybrid. This blended game tries to be both flight simulator and strategy game, but in the end, it's less than satisfying as either.

SEND IN THE MARINES

Proven in Britain's 1982 war with Argentina over the Falkland Islands, the Harrier is a vertical-takeoff-and-landing (VTOL) aircraft designed by Britain and built under license by the United States. (It played a prominent role in the U.S. Marines' part of Operation Desert Storm.) Tilting thrusters direct the engines' power at any angle, from straight back (as in conventional aircraft) to a slightly forward-pointing 110 degrees.

The challenge of flying makes up for Harrier's dull scenery.

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THE 7TH GUEST

By Bernie Yee

Never telegraph a punch. Never give away the ending of a movie. And don't spoil the anticipation of the first all-CD game for the PC.

Okay, so we're tossing that last one out the window. Virgin's double CD-ROM title, The 7th Guest, has been touted as the frontier of multimedia, a peek into the future of computer-based entertainment. Only this much is sure — 7th Guest is the first major CD-ROM entertainment package that really takes advantage of the medium and, in doing so, challenges the traditional notions of game and entertainment.

The 7th Guest, the first all-CD game for the PC, is a visual feast that's a lot like TV.

7th Guest may challenge tradition, but it's not the hero for which game players are looking. Although it's a remarkable title that packs in almost 90 minutes of full-motion video, synthesized and recorded music, and speech, it falls short in game mechanics and, strangely enough, in production values.

Although it's part of the inventory of PC horror games, where preternatural beings stalk unwitting humans, 7th Guest isn't an adventure in the Sierra/Infocom vein. In fact, not only does 7th Guest depart from the norm, it may not even qualify as a game. Count it instead as the first big-name installment in a new category called interactive drama.

7th Guest takes place inside an old mansion owned by a mysterious toymaker, who has summoned six people to his house. As the seventh guest, you're more apparition than anything, for you're able to go through drainpipes in surreal fashion and eavesdrop on the other guests as they puzzle out why they were summoned. The drama unfolds as the characters act out their roles and you manipulate the environment.

The world of 7th Guest is beautifully rendered in 3D, but it's not the kind of go-anywhere, jump-and-fly 3-D environment you find in something like Ultima Underworld. You're limited to one path in moving from location to location, as though your eyes were mounted on a camera.

The almost completely computer-generated house interiors are exquisitely detailed in SVGA mode. Graphics images are displayed in letterbox format, a rectangular display that provides the same dimensions as a movie screen. In all, 7th Guest is a visual feast.

Don't look for an interface here. The mouse cursor alternates from a wagging skeletal hand and chattering teeth to a skull with a pulsating brain. Not surprisingly, this minimalist approach limits the way you interact with the world within 7th Guest. You can't keep an inventory of items, so don't even try to steal some of the silverware from the table. The only game interaction comes in the form of fairly abstract brain-teaser puzzles scattered throughout the house.

Experienced adventure gamers may find this paucity of manipulation stifling, but players who view 7th Guest as an opportunity to participate in a video drama instead will find 7th Guest a grand expedition into unchartered territory. Your main task is to simply figure out what's going on, for this is essentially an interactive television show on the PC, where you control where you want to go and what you want to see. The puzzles only add a bit of mental gymnastics and make the experience less passive.

But this is where 7th Guest's production values fall off. Rather than competing with King's Quest VI or Monkey Island, this game competes with TV. The video sequences with the actors are a bit grainy, while the acting itself borders on ham and cheese. That's a problem with any game that uses digitized images of people.

7th Guest's hardware requirements are as formidable as its acting is weak. A 25-megahertz 486SX system is optimal, though 386DX machines will do. A fast CD-ROM drive and video card will help, as will a MIDI device added to your regular sound card.

As multimedia, 7th Guest will dazzle you with a look and feel never before seen on the desktop. It heralds a new kind of computer entertainment, one both more and less satisfying than anything you've ever played.

Virgin Games, 18061 Fitch Avenue, Irvine, CA 92714, (714) 833-8710; IBM PC or compatible, 20MHz 386DX or faster required, 486SX or faster recommended, 2MB RAM; VGA, SVGA recommended; supports AdLib, AdLib Gold, Pro AudioSpectrum, Pro AudioSpectrum 16, Pro AudioSpectrum Plus, Roland MT-32/LAPC-1, SoundBlaster, SoundBlaster Pro, SoundBlaster 16/WaveBlaster, Turtle Beach; requires hard-disk drive, mouse, CD-ROM drive with 150K/second sustained data-transfer rate, MSCDEX 2.2 or higher; $99.99

Hovering is possible, and even with heavy loads, the Harrier needs only a short takeoff or landing run.

Domark's Harrier Assault presents the complex challenge of this unique airplane in a flight simulation coupled with strategic elements. You order missions and select battle plans for a campaign, but you prove yourself by flying missions, destroying enemy targets, and participating in support actions for an amphibious landing squad.

Before you fly, you need to complete your training in the *Part-Task Simulator*, practicing each flight skill required and improving your combat effectiveness. During training, the game drills you on takeoffs and landings, hovering, and firing your weapons. The cockpit and heads-up displays are realistic, but you'll fly in a VGA polygon-graphics theater of war. All manner of electronic systems are available for targeting, navigation, and defensive radar.

The mission scenario in Harrier takes you to beautiful Indonesia, where a military junta has taken control. NATO has authorized a quick intervention, and the nearest force is a small amphibious-assault group. Of course, you head the Marines. It's fortunate for you that you've got some Harriers on deck.

HIT THE BEACH, HIT THE SKIES

You begin on board the *U.S.S. Tarawa*, an amphibious attack carrier, and start by implementing a battle plan. A fully outfitted computer control room, the TAWADS (tactical amphibious warfare data systems), awaits your orders. In this strategic section of the game, you plan interdiction missions and launch attacks to soften up the enemy before the Marines hit the beach. A standard strategy map of the area — packed with a myriad of information — fills the screen. Don't worry; you won't be stuck with a desk job. As each mission of the battle plan begins, you have the opportunity to fly it yourself.

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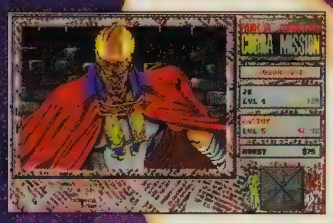

R This game is not for the faint-hearted. It contains violence and some material inappropriate for minors under 18.

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MEGATECH

Meant as the best of both worlds, this simulation/strategy combination is enjoyable enough, but lacks a little in each category. Harrier's strategic aspect is basic at best. You select way-points and targets, but have limited control in other operations. You'll wish for more complete control over the entire operation, not just command of a few planes. Other than picking the size of the landing force, you have almost no say in the Marines' battle. (If you want to concentrate on flying, you can tell the computer control center to create missions for you.)

FLIGHT TIME

Although the challenges of a successful strategy are engaging, you'll find yourself poring over the map while the real action is in the air. At least the real action — the flight-simulator half of this combo — is more satisfying. The Harrier is a difficult aircraft to fly, and real pilots are required to log hours in a simulator. You will too.

Once mastered, though, the Harrier's agility is intriguing. Popping up undetected from behind mountains and firing a deadly salvo at enemy targets will prove the effectiveness of this assault plane. You'll find dogfights easier if you're nimble with the thrusters; you can trade air speed for maneuverability by angling the thrusters downward. From this semi-hovering position, you can fire your guided ordnance, then escape vertically.

Weapons act realistically, while battle sounds are better than the noise you hear from the engine. And when you return to the *Tarawa*, keep your mind on business. (Six Harriers were lost in the Falklands War: Two were shot down in enemy action, a pair collided in midair, one crashed on take-off, and another rolled off the deck in foul weather.) Don't forget to set your wheel brakes.

By the time you can do that, you might be tired of the pyramid mountains and minimal ground detail you see through the cockpit window. Flight-simulator purists may want to add this aircraft to their repertoire and hope for improved graphics images in the next version. Only the challenge of flying a VTOL makes up for this game's dull scenery.

TURBULENCE

Harrier is no F-15 Strike Eagle III or Falcon 3.0. Instead, it tries to meld disparate elements that break up the action rather than enhance it. Good thing the real Harrier works better than this digital copy.

1 2 3 4 5 **6** 7 8 9 10

Domark, 1900 South Norfolk Street, Suite 202, San Mateo, CA 94403, (408) 296-7933; IBM PC or compatible, 2MB RAM; VGA; supports AdLib, Roland, SoundBlaster; joystick recommended; $59.95

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Metal monsters seek your destruction!"

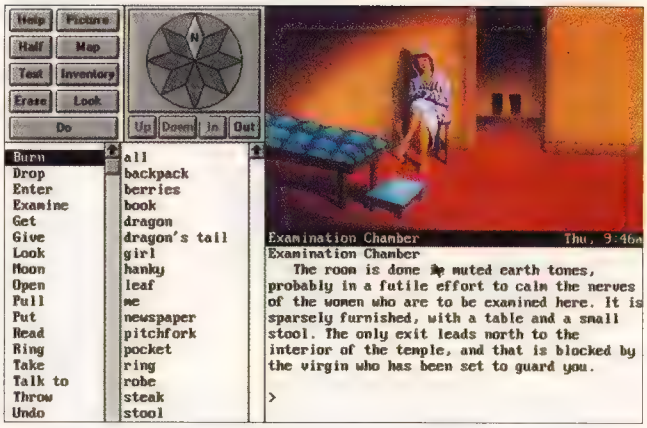
ERIC THE UNREADY

By Peter Olafson

What an airy, happy piece of writing is Eric the Unready. Whether the subject is muck under the privy in the first episode of this text-and-graphics adventure, or a variation on Dana Carvey's ornery-old-man routine in the second, author Bob Bates is always right there with something pithy. This is another funny adventure from a guy who's good at 'em.

A CONSPIRACY OF CHUCKLES

Eric the Unready displays the same easy authority Bates showed so successfully in Timequest. When the dysfunctional young knight Eric tells a disagreeable tree that he'd get by if he were Sir Lancelot, you just know the tree's going to come back with "I knew Sir Lancelot, I worked with Sir Lancelot, and, believe me, you're no Sir Lancelot." When the screen twitches and you find yourself beside a certain small, white house, you can bet that there's going to be something in the mailbox, that the kitchen will stink of garlic, and that the living-room rug is worth a look. And aren't those the French knights up there on the castle walls the ones from Monty Python's *The Holy Grail*? Eric's full of a writer's sweetly reckless pleasure. That's the nice thing about text adventures: You can throw your personality into them and have it beam back out at the player.



Eric the Unready features handy verbs and nouns columns.

It's a spirit preserved in the music (as charming as that in any of Legend's games), the warm graphics images, the transparent copy protection, the Boris Vallejo cover (sort of a parody of Vallejo covers in itself), and the "legal stuff" in the manual. (Although Legend's not the first to poke fun at a rights-and-warranties diatribe.)

Eric's actually not so much unready as unlucky and uncoordinated — a sort of literal version of the knight errant. He's forever setting off Rube Goldberg-like chain reactions, something you may wish were an even bigger part of the game. He's a most-

Continued on p. 62

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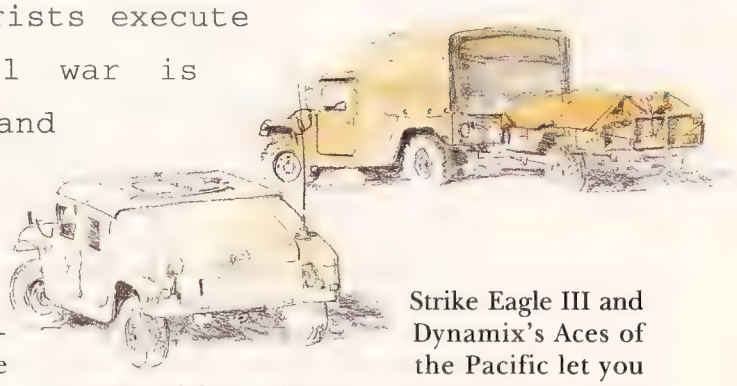
Illustration Dahl Taylor

DEPLOY DESTROY

Match wits against the best the PC has to offer — strategy war games that let civilians play general and armchair militarists execute large-scale campaigns. Real war is hell; war on the PC is grand make-believe. If only we could keep it that way . . .



By Wayne Kawamoto * Contributing Editor

Without a doubt, giving marching orders on the PC is a compelling experience. Maybe it's the challenge of outwitting an opponent in a mental game with dire consequences. Perhaps it's simply a power trip to control the destinies of soldiers, even make-believe ones. Or maybe it's the best way to experience history and the only way to change its course. Regardless of the reasons, game companies keep firing out war games, and eager gamers keep loading them on their hard drives.

War on the PC comes in as many incarnations as the real thing. Simulators like MicroProse's Strike Eagle III and Dynamix's Aces of the Pacific let you command destructive weapons that go *mano á mano* with the enemy. Other computerized war games put you in tactical control of troops that battle in small-scale, real-time skirmishes. Count Mindcraft's Siege and Electronic Arts' Centurion here.

But the mother of all PC war games — born from paper and cardboard-counter board games — is the genre that lets you think of the Big Picture, where you maneuver land, sea, and air forces against an enemy. Moving paper maps to the computer screen and replacing the roll of the

STRATEGY GAMES MAKE YOU THE SUPREME COMMANDER

dice with mathematical algorithms, these PC slugfests involve you in long campaigns and entire wars.

Unlike Hollywood's Lone Ranger-style commandos and their arcade-game clones, strategy war games slap a veneer of civilization on humanity's most-destructive hobby. They let civilians play general, let amateurs make major decisions, let armchair militarists spill digital blood. They're the stronghold of the purist who couldn't care less about hand/eye coordination, but instead wants to match thinking skills against the best the PC can offer. Several recent releases fill the bill — Campaign, Line in the Sand, Empire Deluxe, and Patriot among them. Let's charge out there and take a look.

Rewrite the history of the Big One, thanks to Campaign's unusual blend of strategy and arcade action.

WAR IS HECK

Empire's **Campaign** may show some board-game roots, but it ultimately offers an unsatisfying — and peculiar — blend of World War II strategy and arcade-style action.

Like classic computer war games, Campaign plays on a map that shows airfields, production centers, rivers, and villages. Your forces — tanks and other vehicles, engineers, anti-tank vehicles, spotters, artillery, and infantry — may be in three different postures: mobile (moving), stopped, or dug in. Interestingly, Campaign represents the status of your units with happy faces; hey, have a nice day out there in the foxhole, okay? When your men are in trouble, the campy face shows sad instead.

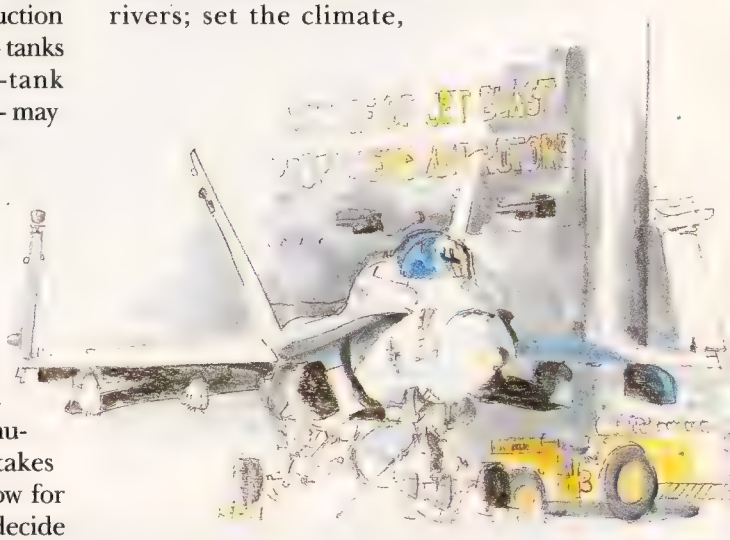
Campaign's production centers replenish your front line with fuel, ammunition, and weapon systems. Each item takes time to produce, and you'll have to allow for factory retooling for new items, but you decide what to build. When the goods are ready, a convoy delivers them to the front. On the main campaign map, though, units blend together, making it tough (even when you zoom in) to tell them apart. Add marching lines for each unit, and you have a mangled mess on the screen.

When you come within range of an enemy force, Campaign switches gears — grinds them, actually. You move into the game's battle mode, where rather than command forces on a map, you take charge of a tank in a real-time battle. The outcome of this three-dimensional, polygon-based skirmish affects the overall campaign.

You can let the computer determine the outcome, or wage close combat yourself. Pick the latter, and you jump into one of 16 tanks to mix it up with the enemy. Not only do you run the tank — moving it, elevating the gun, firing — but you can leap from tank to tank, even call in air and artillery strikes. If you're on the defensive, you set up your forces where you want, but on offense you must place them behind a baseline. Before going into battle, you also have the option of grouping your forces.

This battle mode makes for a strange hybrid. During the campaign section, you command massive forces strategically. But when you hit the battle part of Campaign, you've got to deal with arcade action that relies more on dexterity than on any ability to formulate strategy. In fact, the entire battle sequence is tiresome, a contrived arcade game that only detracts from this game's real promise — strategy.

If you tire of Campaign's scenarios, you can create your own, or change existing ones with the program's editor. Campaign lets you draw terrain, including hills and rivers; set the climate,



time, date, and map size; lay minefields; and make and edit units.

Campaign's graphics images are par for the PC, but the battle mode's 3-D scenery is a notch below most flight simulators'. It's not a bad game — it's easy to learn and the interface is good. One nice touch gives you information about any icon or button at the press of the right mouse button.

But in the end, Campaign's attempt to serve two masters doesn't work. If war is hell, then Campaign is just heck.

WAR IS EASY

SSI's **Line in the Sand**, a re-creation of Operation Desert Storm, harks back to days of yore, when war games were simpler and more manageable. This game makes a good introduction to computerized strategizing: It's both straightforward and easy to learn.

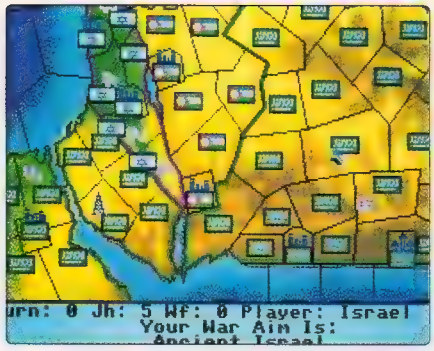
Like war games of old, Line in the Sand plays on a map grid where icons represent various infantry, tank, aircraft, and naval units. Each unit has its own rating to gauge its relative strength in both offensive and defensive battles. For variety, you can choose to play the computer, as well as with and against as many as five other real players. Each player takes a turn deploying forces, executing orders, and attacking. Once the attacks and movements are outlined, the computer resolves combat and determines the outcome according to its own set of mathematical rules.

Before you attack, you can launch air units against enemy targets. Once air combat is settled — your opponent can fire at your airplanes, even send up interceptors of his own — Line in the Sand works through ground attacks. Naturally, you pick the units with which you'll attack and the positions you want to assault, while the PC again determines the result.

Line in the Sand doesn't limit itself to conventional land, sea, and air warfare; it also offers chemical weapons, tactical nuclear weapons, and stealth fighters in some scenarios. The computer calls an end to the fighting when a player's cities, airfields, and oilfields have been captured.

Most intriguing, though, are the diplomatic wars, which provide hidden objectives for each player. Besides the obvious, and overt, campaign to subdue Hussein, for example, Line in the Sand offers diplomatic scenarios that range from an encircled Israel to Islamic jihad. And more than one player may end up "winning."

With only average presentation, Line in the Sand may not win accolades for snappy graphics or innovative play mechanics, but it does serve as a good intro to strategic combat on the computer.



Line in the Sand: today's weapons matched with proven game play.

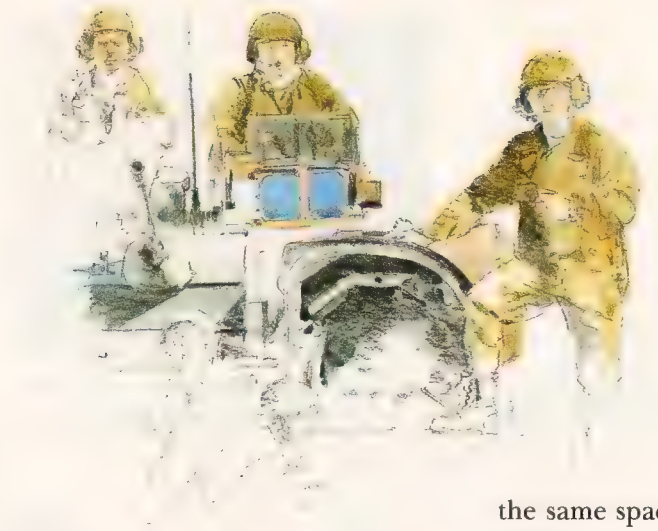
WAR IS EVERYWHERE

Nothing like a classic recaptured: New World Computing's **Empire Deluxe** revisits one of the oldest strategic war games around. No simple update, but a whole new game, Empire Deluxe puts you in pursuit of total planetary conquest. You'll produce items in your cities to fuel your war machine and gradually expand your powerbase through conquest to ultimately enslave the known world. In the brawl for it all, the winner is the last one left standing.

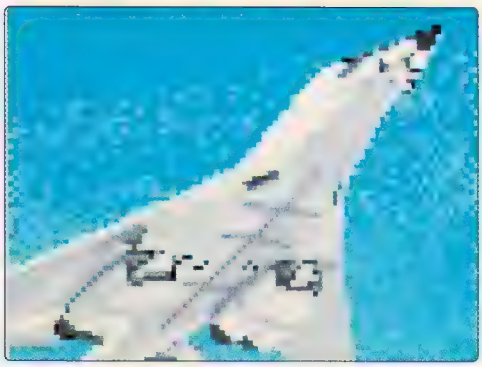
At its most basic, Empire Deluxe plays on a 50-by-50 grid map with varied terrain, including mountains, water, cities, and forests. You move armies and naval task forces composed of transports, destroyers, cruisers, and battleships. Just remember that in this game, the world isn't round, but like the one in Columbus' nightmares, flat. At least you won't fall off the edge.

Empire Deluxe's standard game runs rampant on a larger 150-by-200 grid that maps a wrap-around world. You must explore undiscovered terrain and manage new units, such as fighters, submarines, and aircraft carriers. This variation is more challenging — the map's not laid out in front of you as in the basic version. An advanced game makes more use of terrain, features four more units (including infantry, armored units, and bombers), and includes airbases.

You take turns moving pieces, setting production levels, and giving orders. Attack is simplicity itself — just move your piece into



the same space as the enemy, and the computer declares a winner. You capture cities the same way, then use industry to produce more goods for your war machine.



Empire Deluxe: You're after nothing less than the whole world.

As in chess, each Empire Deluxe piece has its own strengths and weaknesses. Armies move slowly, but they're the only units capable of taking cities by land. Naval destroyers are quick and easy to produce, but cruisers can bombard shore targets. Naturally, each piece moves a set distance per turn. If you tire of the game's scenarios, you can build your own with the game's editor, a tool that lets you create new cities and units, set the sighting and production rules, and "paint" terrain.

The computer offers five levels of difficulty. You can even play by e-mail, a process that involves sending a file back and forth. Or you can face live foes in remote real-time play via modem, network, or direct-connect cable.

Empire Deluxe, though easy to learn, is a compelling war game that sacrifices real-world ties for a more-abstract flavor. Unless you want to re-create headlines, this is the place to be.

WAR IS A HEADACHE

Like Line in the Sand, Three-Sixty's **Patriot** thrusts you into the middle of Operation Desert Storm. Unlike the SSI game, Patriot is ambitious, detailed, and complex. In fact, Patriot's electronic warmongering is so complicated it's tough to learn and play. You command some 2000 units of the Coalition forces and face the Republican Guard head on. You'll even have the opportunity to take the battle to a decisive conclusion, something the real Coalition couldn't do.

Patriot's accurately rendered terrain comes courtesy of maps by the Defense Mapping Agency, the department that provided the maps used by commanders in the real Desert Storm. Nor are those maps divided into a formal grid, as are those in most other PC war games.

Throughout the game, Patriot models individual weapons, terrain, vehicles, and troops rather than rely on the the usual combat-effectiveness ratings. Display is an attractive 640-by-480-by-256 color resolution.

Patriot mimics the organizational structure of military forces, down to the way you give orders; you must work within the traditional military chain of command. An organization chart lets you click and cull units; select a unit and its subordinate "children" are also selected automatically. Your orders apply to everyone down the line. You can also choose to command your forces in map mode, or in a combination map-and-organization mode.

You designate the formation of your forces, including cover (forces placed ahead of the line to locate the enemy's main force); line (heavy units that engage in the main thrust of combat); reserve (units held back to lend support when necessary); and support (units that provide services to the line, including artillery and air support and combat engineering). You can, of course, shift formations between units during battle.

Besides assigning the formation, you set the posture for each unit, a technique that determines how fast units may move, how effective they'll be in combat, and how vulnerable they are to attack. You can assign your troops to travel, mount an attack, probe, defend, delay, and withdraw to varying levels of mobility, offensive, and defensive strength.

Other options let you assign resupply priorities, as well as rank how units receive vital air and artillery fire support. To control where your units go and what objectives they pursue, Patriot provides three ways to designate movement that vary in difficulty and level of control.

A variety of map views show you the action. In preview mode, the program displays two maps showing the entire theater of war and the immediate area around the currently selected unit. In single mode, you view a solitary map showing the current unit. Split mode depicts the current unit in one map and subordinates in the other.

Even the game's time scale is based closely on Desert Storm. A number in the upper-right corner of the screen indicates the number of days since the initial air campaign and the elapsed time. You can select variables for different levels of air superiority (for both sides) and the morale, fatigue, and equipment of the troops.

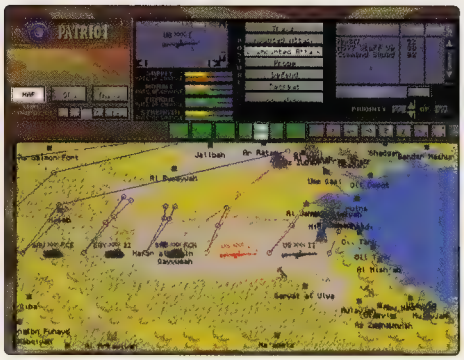
Patriot may sport impressive features, but it has its share of problems. In the map views, it's difficult to differentiate units; the designations blend together and the program's zoom feature doesn't offer enough detail. When you add arrows to move units (one of the methods displays 11 arrows on screen), you end up with a jumbled mess.

Although replicating the fog of war is vital to realistic war games, Patriot goes too far — it's simply tough to tell what's actually happening at times on screen. Forces report to you in separate windows, for instance. On a 486 — even slowed down — so many windows appear that it's hard to see the map. The game's documentation isn't enough help, as it assumes that the reader already knows military jargon and acronyms. It's simply not up to the job.

Patriot may claim that it's easy enough for "even a novice," but that doesn't ring true. Beginning computer commanders will be lost. Even the experienced war maker will be hard pressed to make sense of it all.

Three-Sixty is working on an upgrade to enhance Patriot and make it easier to play. As an evolutionary simulation, it brings new levels of detail to the PC war game, but carries a learning-curve burden that's tough to bear.

THIS MEANS WAR



Patriot: for the few, the proud, the most-dedicated war gamers only.

What's left after playing general? What's the next challenge? You could follow in the footsteps of Eisenhower or Grant and head to the White House. Then you'd be ready for new games — like D.C. True's Shadow President. War on the PC can be challenging, captivating, stimulating, even entertaining. Real war is hell. War on the PC is just make-believe. It's better that way. ❑

PRODUCT INFORMATION

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ReadySoft Inc.
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Canada
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EGA, VGA, MCGA
supports AdLib, Roland, SoundBlaster
requires mouse

Empire Deluxe
New World Computing
P.O. Box 4302
Hollywood, CA 90078-4302
(818) 999-0606
$59.95
640K IBM PC or compatible
286 or faster
2MB RAM recommended
EGA, VGA, SVGA
supports all major sound boards
requires hard-disk drive

Line in the Sand
Strategic Simulations Inc.
675 Almanor Ave.
Suite 201
Sunnyvale, CA 94086-2901
(408) 737-6800
$39.95
640K IBM PC or compatible
EGA/VGA
supports AdLib, SoundBlaster

Patriot
Three-Sixty Pacific, Inc.
2105 South Bascom Ave.
Suite 165
Campbell, CA 95008
(409) 776-2187
$69.95
4MB IBM PC or compatible
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supports AdLib, SoundBlaster
requires mouse, hard-disk drive

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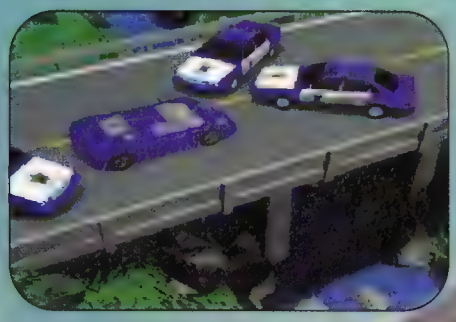

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The sad connection between money and games — it lives in your slack-jawed astonishment at the impulse purchases that show up on this month's credit-card bill. (Honey, I shrunk the checking account.) It doesn't have to be that way. If you're not feeling flush these days, now might be just the time to explore the world of low-cost software.

BY PETER OLAFSON

Labor-intensive creations that they are (and with multimedia, more and more like movies in production), games cost a pretty penny — say, $37 to $45 a pop, on average. The recession may be over, but your wallet is often the last to know. That's not a lament — games are also a singularly long-lived form of entertainment — but a simple fact. List prices for games such as Strike Commander and Pacific War are scraping at $80; expect some CD-ROM games to crack the magic century mark before too long. We pay a heady price for our fun. It doesn't have to be that way. If you're not feeling flush these days — and who is? — now might be just the time to explore the world of low-priced software.

That alternate gaming universe covers a lot of ground. There's budget software, new and old. There's used software. There's shareware, freeware, and public domain, and various incarnations in between. We'll help you reconnoiter the terrain: shareware and public domain here, the others in the accompanying sidebars: "Apogee's Rising Rocket," "Commercial Goes Cheap," and "Off the Market."

WHERE'S TED MACK WHEN YOU NEED HIM?

You may have dark notions about shareware and public-domain titles being some kind of computer-game amateur hour. And before I tell you to dismiss that idea — and I will — I'll allow that to a certain extent you're right. The genuinely great public-domain game is far less common than in the commercial arena. And with good reason.

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COMMERCIAL GOES CHEAP

So you thought that shareware/public domain was the answer to the high price of modern fun. Well, it's certainly one answer. But there's more to the world of inexpensive games than those found on electronic bulletin boards and public-domain libraries.

Big-time commercial labels have been moonlighting in the budget market for years. Accolade had its **ADVANTAGE** line. Mindscape had **THUNDER MOUNTAIN.** Sierra hawks a series of sub-$10 offerings that use characters from its animated adventures as hosts for tabletop games akin to those in its Hoyle line. Virgin offers its second-echelon products — typically games like **REALMS** and **FLOOR 13** from its UK arm — for $29.95, and they usually wind up going for around $20 in stores. Electronic Arts has long been in the habit of offering older games — from chestnuts like **ABRAMS BATTLE TANK** to classics like **SENTINEL WORLDS I** — for $19.95.

Then of course there's a whole market based around the resale and exchange of used software. It's an attractive option because the condition of software — unlike, say, a car or a sofa — doesn't diminish appreciably with use. The only casualty is likely to be the box. You'll typically pay half to two-thirds the store price for a used game, but it's best to go this route when you're looking for lesser-known products that didn't get their 15 minutes on the shelves. I've found **DIE HARD, PROPHECY,** and **KNIGHTS OF LEGEND** this way. The trouble is that the hot games move out just as quickly in the used market as they do in the stores — probably faster — so you need to be fast off the mark.

Also, a number of smaller companies are now selling new games cheap. Villa Crespo Software's **COFFEE BREAK** line now includes 14 titles — each listing for $12.95 and typically selling retail for under $10 — with as many as 40 projected by year's end. Since its early days, the Coffee Break series has upped the ante with such recent releases as **TURN N BURN, 3D PINBALL** (which offers a behind-the-ball perspective), **RODEO GAMES** (six Wild West sporting events), and a pair of solid VGA arcade games called **NINJA RABBIT** and **SPACE VEGETABLES.** The most recent at this writing is **DEMON BLUE,** a dandy little European running-and-jumping game.

Another outlet for cheap commercial entertainment is the monthly **GAMER'S EDGE,** a software-by-subscription collection with a long pedigree of playable games — many of them by the folks at Id Software. The most recent includes a new, vibed-up version of the three-part **CATACOMB** series from Greg Malone — designer of a pair of Oriental-flavored role-playing games, Moebius and Windwalker, that Origin published in the mid-1980s. This 3-D, scrolling, action/adventure series is similar in style to Wolfenstein, and uses EGA rather than VGA.

Actually, we've just caught the tail end of Gamer's Edge. Softdisk is dropping the line and putting muscle behind a new line of VGA games expected to begin arriving late this summer. At press time, the company was considering two candidates for the opening title: a 3-D horror game and a sideways scroller with a dinosaur theme. The older games will still be available (at $14.95 each) directly from Softdisk or through Prodigy.

Then there's the **LANCE STONE** series. They're not games. They're not even comics. Strictly speaking, they're mildly interactive graphics novels, similar to what you'd find on the rack at the comic shop, but with animation and sound effects. The first, **TROUBLE AT THE WOZ,** is available for $20, and a bundle of the second and third issues, called **LIFEFORCE,** was in development at press time. — P.O.

This is user-created software, often designed and programmed in someone's spare time. (Take *one's* literally, because they're often the creations of a single soul.) You're not going to be downloading Ultima Underworld II — or not very often anyway. (Three-dimensional role-playing games for the shareware market *are* in the works, you'll be happy to know.)

Instead, there's a tendency to focus on the familiar and basic, and so you'll find Concentrations, Yahtzees, Minefields, and Canfields to beat the band (although nicely done in some cases, with VGA graphics images and soundboard support). Not to mention Tetris. There are approximately 1259 variations of Tetris; I've even seen one called **Kuwaitris**.

Try to see past the clones, because these are the days of wine and roses for free and nearly free software. Top-of-the-line shareware is almost indistinguishable from the commercial stuff.

Because shareware and public-domain titles tend to follow commercial markets by a couple of years, what we're seeing now is a lay reflection of the industry's surge to minister to the horde of 386 machines. Windows shareware and public-domain titles are busting with new stuff — from war games to systems sims to full-tilt role-playing games and the usual I-swear-I'll-get-back-to-work-in-five-minutes time wasters. Apogee can, in a sense, be credited with creating the market for IBM arcade adventures, and the folks at Epic MegaGames are doing the same for shoot-'em-ups. These are the shareware market's equivalents of companies like Origin and MicroProse; almost anything they do is worth a look.

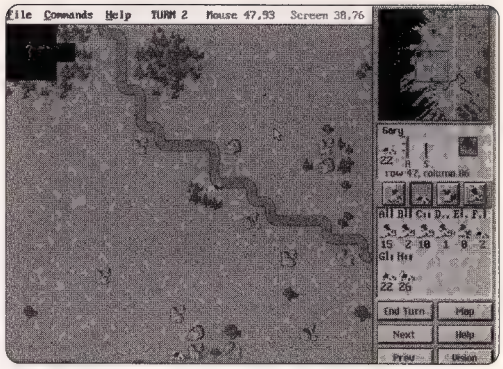
Chef Roger Wilco goes to work at Monolith Burger in this bit excerpted from Space Quest IV, which appears along with two others in Roger Wilco's Spaced Out Game Pack, part of Sierra's Crazy Nick's Software Picks series.

Expect the trend to only gather steam. You don't even have to know C these days to build your own game. A succession of stylish game-construction programs — including Interplay's **Bard's Tale Construction Set**, Domark's **Virtual Reality Studio 2.0**, and Softworks' **Adventure Game Toolkit** — are already available for roll-your-own game makers. SSI's **Unlimited Adventures** (a construction-set version of the original AD&D engine) was just around the corner as this went to press.

GAMES? YOU WANT GAMES?

Sports? There's a neat baseball game just out called **Wild Pitch**. **Cunning Football** has been with us through five generations and there's even a hockey game. Strategy? I recently downloaded a capture-the-flag game as sophisticated as any commercial product.

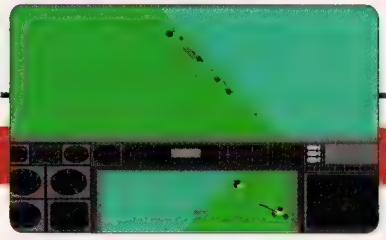
Cards? You can play almost any card game you want, from bridge to hearts to pinochle to Crazy Eights. Adventures? The world's single largest text adventure is an extended version of Colossal Cave called **Humongous Cave**. I don't see a public-domain Lemmings yet, but William Soleau and Apogee have both lent their hands to devilish strategy games.



Your men can assume four positions — from crawling to running — in Carr Software's feature-filled, Windows-like shareware game Capture the Flag.

This list could run halfway through the next *PCGames*. There are thousands of games in this genre and dozens upon dozens that merit your attention. I was just putting this article to bed when I had to pull it out again to rave a bit about **Solar Winds** from Epic MegaGames. It's a supremely polished hybrid of exploration, combat, and role-playing — wholly new to shareware, to the best of my knowledge, and seen in a commercial incarnation only recently in Star Control II.

Of course, shareware and public-domain games are unpredictable — the PC-game press has started to cover the field seriously only recently, and you usually won't get word of mouth about any but the best shareware stuff — but that very unpredictability is part of



You can see ahead and behind at the same time in Kevin Stokes' nifty 130-mission shareware flight simulator, Corncob 3D.

OFF THE CHARTS

This isn't a "Top 10 Shareware/Public-Domain Games" list. I don't dare. There's just too much great stuff I'd have to leave out. Instead, I've assembled a list of ten personal favorites from last week and the last few years.

- **WOLFENSTEIN 3-D.** Apogee. Indisputably the best action game ever released for the IBM PC, quite possibly for any computer (at least until the follow-ups roll in). Anything this addictive ought to be illegal.
- **KEN'S LABYRINTH.** Ken Silverman. This may not have the consistency and instant-crush good looks of Wolfenstein, but it's still smooth and slick.
- **SOLAR WINDS.** Epic MegaGames. An elaborate space game that positively reeks of professionalism. The company could sell this Star Control II cousin easily for $40.
- **ROCK STAR.** Wizard. This sassy, clever game is infectious. You play pop star as you name your singles and albums, then watch them climb the charts. Along the way, you can tour, take holidays to recoup your creative juices, and ingest illicit substances (although not if you're smart).
- **JUMPMAN LIVES!** Apogee. A spartan but still charming clone of the primal 8-bit jumping, running, and climbing game, Jumpman Lives! runs only $5 for a dozen levels. Who'd have thought anything so basic could be so much darned fun?
- **DIAMOND DASH.** Dave Fleming. Simplicity's a great thing, innit? This LodeRunner clone makes hours seem only like minutes.
- **ZZT.** Tim Sweeney, Potomac Computer Systems. Like Kroz, sort of, but tougher, friendlier, more complex. And it comes with an editor.
- **CORNCOB 3D.** Kevin Stokes and Pie in the Sky Software. You don't see many shareware flight simulators — much less stylish, easy-to-learn flight simulators like this one. Best of all, it flies like a charm.
- **PYRO II.** Michael O'Brien. You'd never see a commercial edition of this — and that's one of the great things about "free" software: Designers take chances. It's a great arcade/strategy game with a demented premise — setting fire to the IRS building, among other things — with points reflecting the amount of damage done. Burn, baby, burn.
- **CASTLE OF THE WINDS.** Epic MegaGames. My favorite Windows shareware game, this big Rogue-ish role-playing game takes maximum advantage of the interface.

— P.O.

APOGEE'S RISING ROCKET

FREE (almost)

It started back in 1986 when Scott Miller — then a computer-lab assistant — had his adventure **CAVERNS OF KROZ** published in I.B.Magazette. By today's standards, it was a modest, almost simple game, with character-based ANSI graphics images, a limited palette, and direction-key controls.

But Miller was on to something. Once the game hit the shareware market, its clever puzzles and spirited ambiance captured the hearts of downloaders, and the rest, as they say, is history. Kroz grew and flourished. Miller had started work on an eighth Kroz when it was shelved in late 1990 to give priority to new projects. He won't pick it up again. Miller says those new projects — the graphics games by which Apogee has made its bones — do much better.

How much better? Apogee had sales of $4 million in 1992, and Miller figures that will triple in 1993. Miller quit his $30,000-a-year desktop-publishing job in mid-1990 when he realized that with Kroz alone generating $500 a week, he could do better devoting himself to games full-time. So much for the clichés about starving shareware authors.

Apogee's spin on shareware is essentially the carrot-and-stick trick. Give your audience something for free that it can't resist. Then when it's hooked, give it more, but make it pay. This outfit never releases games in anything less than a series; the first release is shareware, and the follow-ups are moderately priced commercial games.

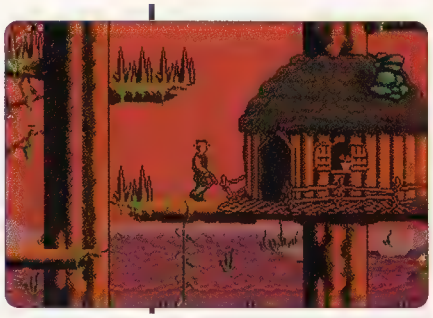
Apogee has had quite a ride. Its name — apogee is the most-distant point in an object's orbit — has become synonymous with shareware arcade adventures. Its post-Kroz catalogue includes the arcade-adventure trilogy **DARK AGES** (the first shareware game to support sound cards); the locked-room puzzlers **PHARAOH'S TOMB, ARCTIC ADVENTURE**, and **MONUMENTS OF MARS!**; a range of find-the-key arcaders with delightful challenges and animation (**CRYSTAL CAVES**, the first **COMMANDER KEEN** trilogy, **DUKE NUKUM**, and **SECRET AGENT**); and recent tour-de-forces like the second Keen trilogy and **COSMO'S COSMIC ADVENTURE**.

And then, of course, there's the fast-action, free-scrolling blaster **WOLFENSTEIN 3-D**, a "Best of PCGames" and Software Publishers Association Codie Award winner. Wolfenstein is Apogee's best seller, with an estimated 22,000 to 25,000 copies sold already and 2200 moving out the door each month.

Late in the winter, Apogee released **MAJOR STRYKER**. It's a change of pace for Apogee — a vertically scrolling shoot-'em-up that shows the influence of classic shooters like **XEVIOUS** and **SIDEWINDER**.

A couple more games should be available by the time you read this. **BIOMENACE** looks to be the next-generation Duke Nukum — everything drawn on a larger scale — while **MONSTER BASH** is a sort of cutesy-pie bloodbath, with your slingshot-armed kid aiming to blow locks off cages to free imprisoned pets.

Apogee has eight other games in development. You should be seeing **ALABAMA SMITH** — a handsome game featuring Apogee's version of the cool Cat in the Hat — and **BLAKE STONE 3-D** before too long. Four more 3-D games are underway, including a role-playing game that will compete with Origin's Ultima Underworld. Stay tuned. This Apogee's orbit is clearly still outward-bound. —P.O.



A glimpse of a forthcoming Apogee Software game — Alabama Smith and the Blood Fire Pendant.

the appeal. I can't convey adequately the pleasure of running through the new crop of games piling up in my download directory and seeing what turns up. There's almost always something that drags me back for another look, or something that has some neat quirk or an idea that, even if it doesn't quite work, is very interesting. If you're burned out on computer games, shareware and public-domain titles can make them feel new again. And they just might keep you out of the stores for weeks.

DON'T BE A DEADBEAT

We've been throwing around the terms *shareware* and *public domain* almost as though they're interchangeable. They're similar, but they're not the same. Public-domain games are essentially free; you can copy them, give them away, dissolve them into the bitstream, or reinvent them as a new doggy toy. About the only things you can't do are charge more than a nominal copying and distribution fee for them, and alter the code.

Shareware has many variations, but basically it's the old try-before-you-buy concept. Typically, you can "evaluate" the game for a specified period — say, ten days. If you like it and continue to play beyond that period, you're expected to pay for it. Prices are usually under $30. In return for *registering* (a term used for *payment*), you receive some sort of perk: a follow-up game, an enhanced version of the one you're playing, a set of older games from the label, a hints-and-tips sheet, or codes to later levels.

It's an honor system, with enforcement effectively impossible. And no little gremlin is going to appear on your keyboard, scowl at you, talk like Popeye, and erase the offending files on the first hour of the 11th day.

But some bright minds have come up with a neat way of drawing people to shareware: Put out a game that's as irresistible as a teaser. (I think Apogee did it first.) You get a taste, you love it, and you play 'til it's complete. When you're done, it creates a manhole in the street of life that keeps on snagging your wheels, making you want more. And there *is* more — usually at least one. The catch is it's no longer free.

THE GOOD, THE BAD

With thousands of titles available in shareware and

the public domain, you need a way to separate the wheat from the chaff:

• **Don't look for games from much earlier than the late '80s.** If you do, you'll probably be disappointed. There are some wonderful games from the early days, but the IBM PC as a game machine was still finding itself back then. It wasn't until the arcade adventure Captain Comic emerged that people began to take notice.

Vintage games have some quirks: Many older titles are pug-ugly, for one thing — colors good for business aren't good for entertainment — and, conceived in an era when 4.77 megahertz was standard, rather too fleet of foot in these 33-megahertz days.

• **Take note of the program's author.** Watch his or her track record. It's hard to lose when you bet on a winning team.

• **Don't judge files by their size.** Big may be just that — big. I've downloaded 700K archives that were drek, and 50K games that were brilliant.

I'm thinking here of Dave Fleming's delightful LodeRunner-inspired **Diamond Dash** — widely available on the nets as DDASH.ZIP — which runs at the correct speed even on a fast machine, unlike LodeRunner itself.

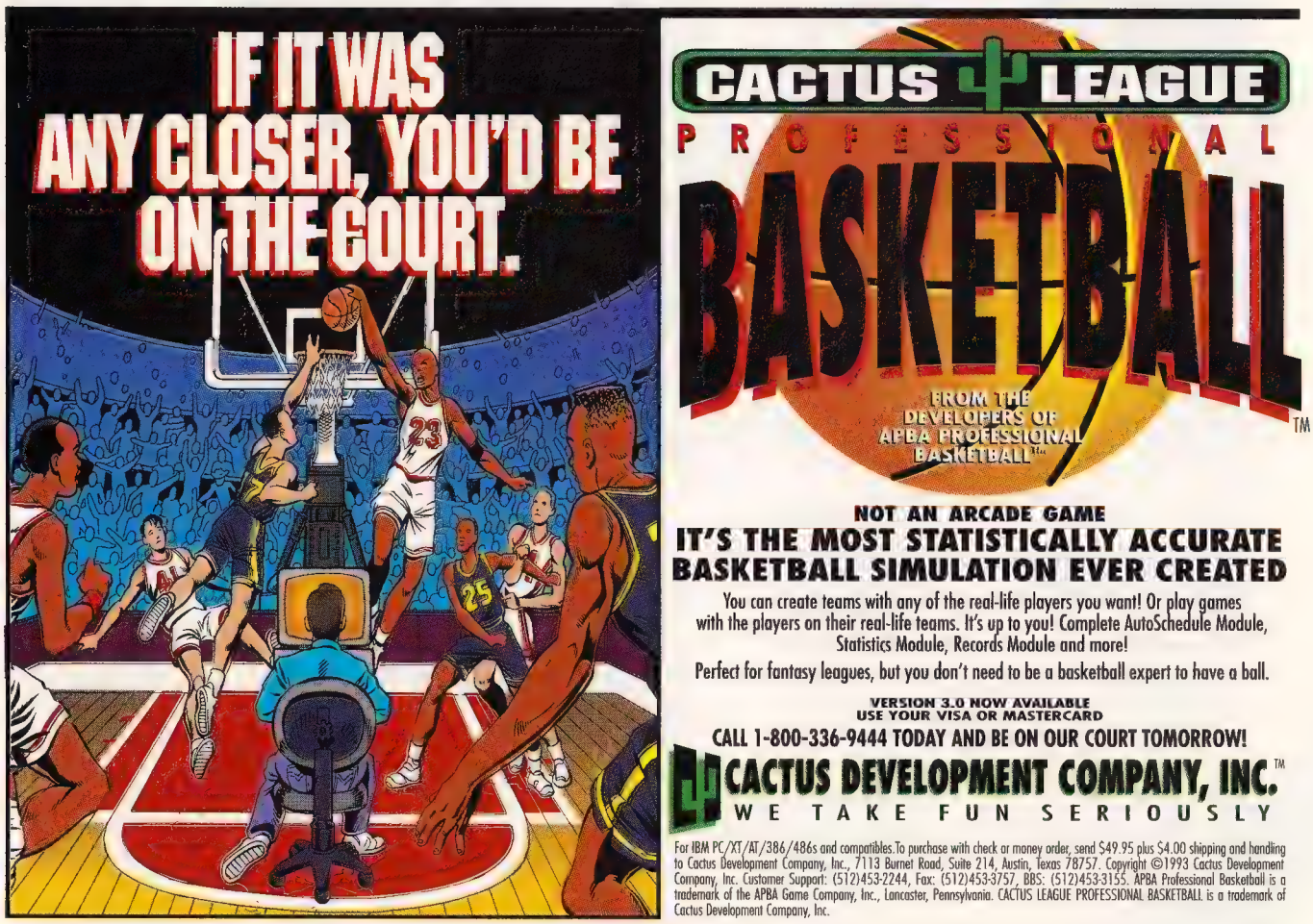
GETTING YOUR SHARE

You can get games two ways. Mail order potentially has the advantage of greater variety, as the games are drawn from diverse sources and you're not nailed down to a given on-line service. If a good BBS isn't within your local calling area, that may be the way to go.

KAM! The rulers are to be believed. The ugliness of you puny beings is more than repulsive. I needed to see for myself before leaving this system what your race looks like. Now I know. You are disgusting.
SELECT A RESPONSE
WHO ARE YOU?
WHY ARE YOU HERE?
YOU ARE MORE UGLY
END COMMUNICATION
YOU ARE BEING HAILED

This delightful alien — encountered near the beginning of Epic MegaGames' shareware Solar Winds — can barely stand the sight of you.

Or you can soothe your immediate-gratification glands and download games via modem for play right now. Don't think you have to join a big on-line network such as **CompuServe** or **GEnie** right off the bat. The better games tend to trickle down to local boards before long, and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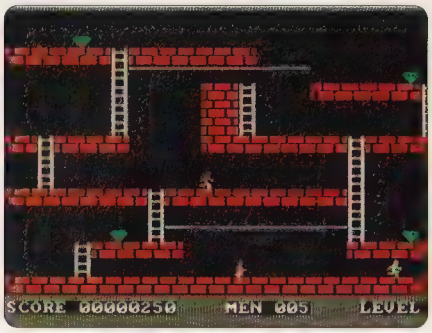

Game size isn't everything. Compact, brilliant, fast but not furious, LodeRunner lives on in Dave Fleming's Diamond Dash.

you can enhance your download limit by uploading unique files you've found elsewhere.

There are some inconveniences. Games from mail-order shareware and public-domain houses usually come ready to run, while files downloaded from a service or bulletin board are usually compacted for shorter connect times. You'll need the right file-decompression utility to open the archive. Don't panic: You can tell from the three-letter suffix which one is required: It's probably *ZIP*, the most common IBM compression scheme, so you'll need to pick up a copy of **PKZIP**.

Don't worry about decompressing ZIP itself; it's a self-extracting archive. Be sure to get the new 2.0 version — the most recent at this writing is **2.04G** — because it's backward compatible with archives compressed with the earlier version. And don't forget that PKZIP itself is shareware and thus must be registered.

Bound documentation is often a perk of registration, but most of these games will come with instructions in a text file. A printer comes in handy to put the documentation on paper.

AN OUNCE OF PREVENTION

Don't forget to look before you leap to download. The larger games run in the 500K to 700K range and may take up to an hour to download at 2400 baud. If you're not sure you want to spend the time — it's best to take game descriptions with a grain of salt — ask around in the message areas, or send e-mail to the uploader for more information. Chances are that someone will be excited enough (or maybe cheesed-off enough) to give you the straight story.

And take the time to pick up a virus checker. It's not likely your computer will catch one — on-line services and mail-order houses check files for viruses before releasing them — but with new bugs cropping up continuously, it's possible something may slip through. You can never be too careful. I once found a "Trojan" batch file that, had I run it, would have reformatted my hard drive. Nice, eh?

Watch your back — and watch your back pocket. You can do both when you dabble in free — or nearly free — games. ❑

PRODUCT INFORMATION AND SOURCES

Apogee Software Productions
P.O. Box 496389
Garland, TX 75049
(214) 278-5655
(800) 426-3123
Commander Keen:
Goodbye Galaxy!
$35 both episodes
Commander Keen:
Invasion of the Vorticons
$30 all three episodes
Cosmo's Cosmic Adventure
$35 all three episodes
Crystal Caves
$15/episode
$30 all three episodes
Duke Nukum
$15/episode
$30 all three episodes
Major Stryker
$30 all three episodes

Paganitzu
$15/episode
$30 all three episodes
Secret Agent
$15/episode
$30 all three
Wolfenstein 3-D
first trilogy $35
first and second trilogies $50

Epic MegaGames
10406 Holbrook Drive
Potomac, MD 20854
(301) 983-9771
(800) 872-7434
Adventure Math, $25
Ancients, $25
Brix, $30
Castle of the Winds, $25
Dare to Dream, $30
Ken's Labyrinth, $30
Kiloblaster, $30
Overkill, $30

Solar Winds, $30
The Jill Trilogy
(Jill of the Jungle), $30
Zone 66, $45

CompuServe
5000 Arlington Centre Blvd.
Columbus, OH 43220
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GEnie
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Rockville, MD 20850
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The Invention Factory BBS
(212) 431-5555 information
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and game-related files.

PC Comix Inc.
400 Williamson Way
Ashland, OR 97520
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Prodigy
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White Plains, NY 10601
(914) 962-0310

Softdisk Publishing
P.O. Box 30008
Shreveport, LA 71130-0008
(800) 831-2694

The Software Labs
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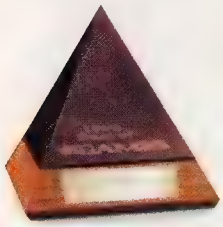

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Why Games Are Late

WE'VE ALL FELT THE ANXIETY, THE ANTICIPATION — WHEN WILL IT GET HERE? WHAT'S HOLDING IT UP? YEAH, YOU KNOW WHAT IT'S LIKE TO WAIT FOR A LONG-PROMISED GAME TO COME DOWN THE TRACKS. BUT HOW'D IT GET OFF SCHEDULE ANYWAY?

By Barry Brenesal * Contributing Editor

Remember the last time you looked for the latest, greatest flight simulator, war game, fantasy/adventure quest, or role-playing monster, only to discover that it had been delayed 'til next year? *Swine*, you think. *They did this on purpose.* But you're wrong. The last thing in the world software developers want is a delayed release.

Yet it happens all the time. And don't you want to know why? The people who make the games have some answers. *You* get to decide whether or not they're just excuses.

BUT IT'S SO HARD TO PROGRAM

Games are, by nature, hardware intensive. In fact, they're closer to the cutting edge of PC technology than any other program category, with the possible exception of business-presentation software. (When's the last time you saw a DOS database or word processor that required a 486 chip, super-VGA graphics, and 16-bit stereo sound?)

Being on the edge may make for exciting programming possibilities, but it invites programming headaches, too. "The PC is a rapidly moving target," says Richard Garriott of Origin Systems. "Only two products ago, we used an 8086 machine at 4 megahertz with 640K of RAM and a single floppy drive. Now our 'typical computer' is a 386/25, with 4 megabytes of RAM and a 30-megabyte hard drive. You can't predict that kind of growth."

But programming teams try. They have to — if they don't, they'll be stuck with finished games that are old news before they hit retail. Jon van

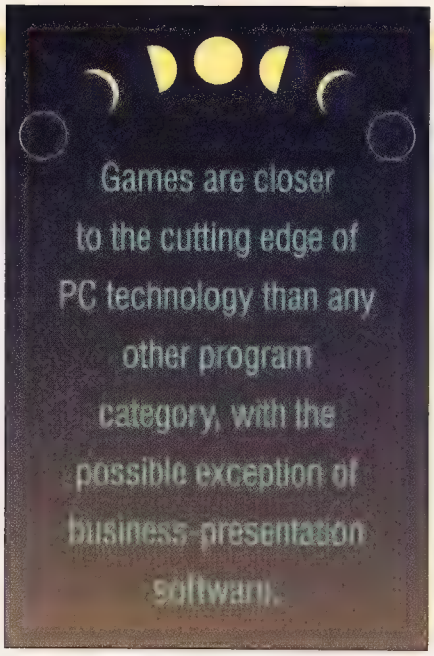
ILLUSTRATION BY RON FINGER

Caneghem, president of New World Computing, says, "The worst-case scenario is when you're about to release a product and a competitor gets there first with a few features that access newer technology. Meanwhile, you've invested half a million in it — and your product is dated. That happened to a lot of people when the accepted resolution standard moved from 16-color EGA to 256-color MCGA/VGA. Many EGA products never saw the light of day."

Kelly Flock, general manager of LucasArts Games, agrees: "To make any worthwhile title, you have to upgrade your technology continually. You have to project your platform two to three years out, because a game may take that long to develop. And inevitably you find out that you've under-figured it."

That happened recently to Strategic Simulations, which completely overhauled its main fantasy role-playing engine for the first time in three years. "**Dark Sun** was scheduled for September release originally, and shown in bits and pieces as early as June 1992," says Bob Lindsay, SSI's vice president of sales and marketing. "But we underestimated the development time for the new engine, and the market didn't stand still. I shot $40,000 in advertising on it by early 1993. That leaves us in a precarious position, because we believe in the product. So we need to throw still more money behind it and take a lot of grief, as well."

On the other hand, overshooting the technological mark doesn't happen as often. But it still occurs, particularly with popular game categories that demand innovative features to push them to the front of the pack. Andy Hollis, a project director for MicroProse, recalls that "with **F-15 Strike Eagle III**, we thought that super-VGA graphics would take the world by storm. We spent several months working on it, until we decided we couldn't get the frame rates we wanted — and that users wouldn't care. That's several months wasted. But we risked the time, rather than not trying it and having a lot of disappointed users."



If predicting what the consumer will buy is tough for American game developers, it's even harder for companies trying to satisfy markets in several countries. Seinosuke Fukui, vice president of U.S. operations for Koei Corporation, knows how difficult it is to walk the international line: "There are PCs in Japan, but VGA resolution and sound-board support are totally different. The Japanese hardware market has been stable for several years now, but the American market is intensely competitive and changing constantly. That makes it very hard to prepare technologically adequate game transfers."

That competition is the pride and despair of American software developers. "The larger the product, the more difficult it is to make it work right," says Mark Caldwell, vice president of product development for New World Computing. "I've got a friend who works at NASA as a programmer. [Those people] spend more time testing code than writing it."

You might think NASA would have a few problems games don't. When it comes to program complexity, though, the playing field is fairly level. NASA, at least, has only one shuttle or satellite launch to deal with at a time. Game developers have to take into account a bewildering variety of computer configurations. It provides endless chances for incompatibilities with someone's system, something that invariably results in angry phone calls to customer support.

Jon van Caneghem feels that "software and hardware compatibility has become a leading cause of product delay. So many people have different memory managers, device drivers, and [memory] resident programs. You have to install and try your new game with every potential combination — everything from disk doublers to screen savers. All it takes is any one of them to do something nonstandard — which nearly all of them do — and you've got to start again."

So software developers test — and test and retest — to find hidden incompatibilities. David Lester, president of Impressions Software, tells of buying new sound drivers recently from a widely known and trusted source: "We checked them out with our in-house SoundBlaster Pro cards; they worked perfectly well. The code went in. Then, several days later, one of our beta testers called up to say they didn't work with his SoundBlaster Pro." Back into the testing loop, again.

"Mouse drivers are fairly well understood," suggests Richard Garriott. "But then you find more and more conditions as your game develops in which that driver fails or has to be extended. It's called *code maintenance*, and it happens all the time these days. You have to make a best guess on how much maintenance is required for a piece of code as it's redeveloped continuously and used differently. Half the total time on programming one of our projects is spent maintaining the total code."

"And when you actually find a bug and fix it, you may find you haven't fixed anything," adds Lester. "Programming code is a balance of a whole lot of factors. Far from being an isolated instance, one fixed bug often forces other changes all down the line. Then you have to start the whole testing process again. You can't assume, after that many alter-

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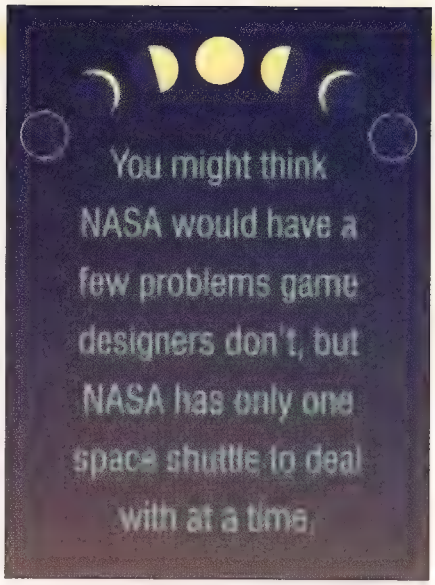
ULTRASOUND SMOKES THE COMPETITION

ations, that your product is bug free." Sometimes it works perfectly well — until you put it all together. That can be heartbreaking. "**Strike Commander**, for instance, was supposed to ship before Christmas," says Richard Garriott. "But we fell into the integration trap. All the pieces worked independently, looked good in demo. But then it came time to link the component parts, and that showed us a whole new set of problems.

"So with **Ultima VIII**, we're doing something different — production cycles for different sections of the game that bring everything to closure every month. Then we integrate the parts. Sure, it's wasteful in one sense: Each part stops while it's all put together. But it also means that the pieces are linkable as a unit, that they're bug free when working together. It's a true state-of-the-project as it stands at that moment. If Ultima VIII ships before this Christmas, our cyclic development plan will have succeeded."

Even after a developer has determined the hardware platform, programmed and debugged the software, and checked for incompatibilities, there can still be good reasons to go back and make major product changes. "By definition, what we're building is entertainment software — that's the final result," say Andy Hollis. "Specifications don't really let you know whether something is going to be fun. So until relatively late in the process, when you actually play the game, you don't really know whether or not it's going to be fun. That makes products evolutionary, rather than preset. The original release date is a best guess based on previous experience."

Brian Fargo, executive producer for Interplay Productions, concurs: "We're not like books or newspapers. What we do is interactive: You have to play-test games and change them to meet people's expectations. It's a fluid process. Some movie producers change film endings after prescreenings, but we have to change a lot more than that." He sighs heavily,



and its echo can be heard in game designers' offices and labs across the nation.

BUT IT'S NOT READY YET

Programmers try to make great games. Marketing people try to sell great games. There's a chasm between the two, and sometimes production deadlines fall straight into it.

"Research and development [the programmers] never knows technically when they'll be done — there are too many variables," says Bob Lindsay, SSI's vice president of sales and marketing. "So marketing gets a best estimate. If you're 60 to 90 days late, it just heightens interest. **Eye of the Beholder** was like that. In retrospect, it turned out to be an optimum time to let the project go. Beyond that, I've blown my entire ad budget as the product became old news."

It's the nightmare that lingers in the brains of marketing mavens. They know the bottomless money pit that awaits good games that are late. As LucasArts' Kelly Flock points out, "There's nothing worse than having a couple of hundred thousand dollars tied up in inventory. You've got marketing, components, publishers, internal expenses. Let several months slip on a new release, and you probably end up with $50,000 to $75,000 worth of unexpected costs. Then you have to rebook your orders and honor your seasonal discounts."

"Take the Christmas market. Everybody tries to get into that," says Richard Johnson of Mindcraft. "Your distributor may have arranged with retailers to give dollars-off coupons for your new game. Either you have the product there on time, or you disappoint a lot of people. So if a game isn't ready, where do you let down — on the quality of the game? The distributor and retailers? Your customers may be shortchanged either way."

Fred Jones, Ebook's CEO, takes a hard line: "You must be willing to drop features, settle for less testing, or take 40 to 50 minutes of audio instead of more on a CD. If you can't make a deadline, it's because of inadequate project management."

Brenda Garno of Sir-Tech Software has a different point of view: "**Crusaders of the Dark Savant** was so late because it turned out to be three times our original estimate in size. We lost money on advertising and considered releasing it in sections. But we decided finally to wait and send it out all at once." The result was a role-play best-seller notable for its depth of plot.

Kelly Flock, once again, is philosophical: "We get a lot of heat when the product's late. You take a lot of abuse on the bulletin boards. But you can't blame them — we got them excited, and then we can't deliver.

"It's not that we mean to tease them. It's just that the product has got be the best possible. There's an axiom in software development: Until you ship it, everyone says you gotta ship it. After you get it out, everyone talks about whether it's good or not. So **Secret Weapons of the Luftwaffe** slipped ten months. But when it came out, it was a product we could all stand behind. I guess I'd rather take a little abuse and accept the lengthy rewards."

BUT MY PROGRAMMER GOT HURT SNOWBOARDING

But creating a game involves much more than just programming and marketing — it's actually personnel management at its most intensive. "I created **Ultima I** through **V** by

myself," says Richard Garriott. "All the work: art, writing, programming, most of the sound effects. For **Ultima VIIb**, we employed 30 individuals every day, all day long. Coordinating and managing a 30-person project is a very new problem in the computer-gaming business."

Companies that create a number of their releases in house, such as Origin, have become the exception rather than the rule. Many software companies contract to release games that were actually created by outside production houses, or they divide up shared responsibilities for a product. Origin itself has done this with the **Ultima Underworld** series.

When game companies don't do their own programming in house, though, it's harder to keep production deadlines from sliding. Seth Mendelssohn, public-relations and marketing director for Virgin Games, has firsthand experience with that end of the spectrum.

"Developers you're working with sometimes overextend themselves," he explains. They don't have the resources to finish what they've started. You don't find that out until it's too late. Synergistic, for instance, suddenly lost a number of artists and programmers to better-paying jobs. That left some unfinished projects. They did their best — but the result was several games long overdue."

The alternative nightmare is a production house someone else has bought out. It's ironic, in a way. You start out by hiring independent programmers who do good work; their games get noticed. Then another company buys your development team — lock, stock, barrel, and Doritos — even if your staff is still working on your stuff.

That scenario has happened to Virgin Games. "One of our contracted developers was purchased by another software vendor," Mendelssohn recalls. "They were faced with competing requirements for their time and expertise. **Shuttle CD** was held back, as a result." Virgin learned from the experience, however, and bought its own subsidiary development team. As a result, the company's Westwood Associates game releases (**Legends of Kyrandia**, **Dune II**) have débuted on time.

After all is said and done, though, there's still the intangible — the stuff for which you just can't plan. "We had a game for Nintendo awhile back," Mendelssohn remembers. "The guys developing it went overseas on vacation and never came back. Our game, if it's ever been finished, is in Ireland."

"You know," says Brenda Garno, summing up, "it would be really nice if there were some little store in Utica, New York, that sold fully made games to all developers. If there were, I'd be the first one in there with a shopping cart." ❑

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Circle 116 on Reader Service Card.

By Peter Olafson

HOME FIRES

You are *there. Finally. Really.*

I know it says "You Are There" in big type at the top of the page. In your dreams, pal. The war gamer's perspective, for example, is almost always well removed from the battlefield. If anything, it's more like the view from a spy satellite orbiting 100 miles up. We may get involved in the game, but not in the fighting — we keep our noses clean.

The point, I guess, is that computer war games aren't really *war* games. They're strategy games that reduce the fear, the spectacle, the carnage, to a nice, clean, accessible numeric format. You don't experience them, don't feel your way through them, except at some clinical level, and if the feelings behind this most horrendous of human hobbies is left behind, well, what's the point?

I'm certain that one of these days someone will design a *real* first-person war game casting you as a sergeant of a platoon under fire. I can imagine taking orders from battalion HQ (at least until a stray bullet trashes the radio), trying to translate command's out-of-touch orders into realistic platoon objectives, running down a tree line to storm a French farmhouse and even dashing headlong through the woods in panic when an enemy mortar zeros in on your position.

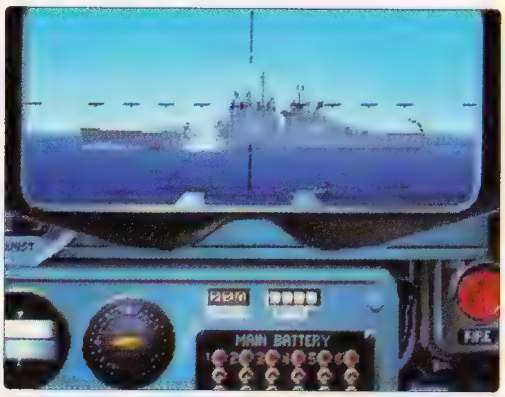
FOR NOW, SETTLE FOR THIS

But I'm interrupting this fantasy for an important announcement: A taste-test of this is available now. It's **Task Force 1942**. This simulation of WWII surface-ship naval combat in the Solomons is the first game I've played since I started this column that made me feel I wasn't putting you on by claiming "You Are There." I know because, for a few hours, I was.

Nineteen ninety-two was the year of the battleship, with at least three 3-D surface-combat naval games putting in appearances: MicroProse's Task Force 1942, **Dreadnoughts** (a sophisticated World War I sim from England's Turcan Research Associates) and SSI's **Great Naval Battles**, which holds court in the Atlantic. All three have something different to offer, but in the latter two, the game element is dominant. That is, you're simply playing a game; you're not really there. When you're playing those two games, the "there" in "You Are There" means "in front of your computer."

That's not necessarily a bad place to be; I don't mean to slight those games, as they're each quite fun on their own terms. But Great Naval Battles comes across as merely a surface version of Silent Service II — an ultra-sophisticated shooting gallery with a periscope view in which ships don't physically exist in any persuasive sort of way.

Dreadnoughts' ships have more to them, and the view from just behind and above the action does have a certain immediacy. But beside either of its competitors, this game's stop-action approach makes you think of nothing more than a series of snapshots or slides.



Task Force 1942: Can you smell the smoke?

By contrast, Task Force makes you feel as though you're moving intuitively through a real world. Even when you're working the various control screens — a point at which a game invariably feels most like a game — it's more as though you've simply turned your head rather than turned on some executable file.

BATTLE WEARY

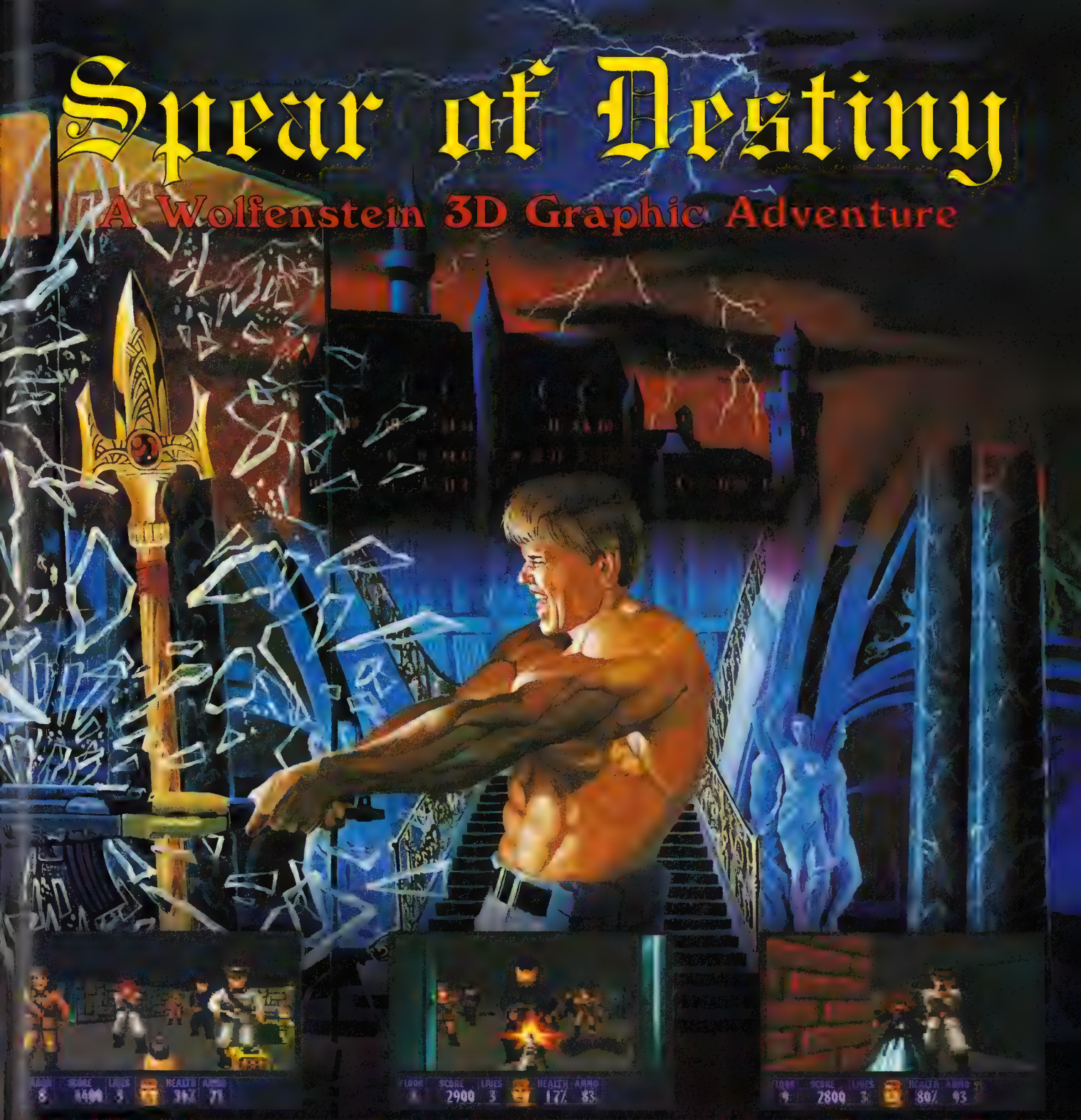
And on an emotional level, Task Force is a genuine breakthrough. One scene proves the point better than any. I was aboard a cruiser plying southwest into the sunset, toward a great, dark mass of land. The surface battle was essentially over, but I could still pick up the occasional pinprick flash and whomp of distant fire — the survivors exchanging cannonades at near-maximum range. Off in the west, just visible in the half-light, ships were burning, others sinking, and some wheeling in giant, useless circles.

We'd won, if only just, and I should have been happy. I'd been working toward this all evening. But I couldn't bring myself to feel good about it. Call me crazy, tell me it's only a computer game, but the scene had the doom-struck quality of Pearl Harbor after the last bomb fell. I couldn't help but think of the digital sailors on those foundering electronic ships.

The game got to me. It brought the war home. My nose wasn't just dirty; it was bleeding, and all this just sitting in my office at home. But in my heart, I was there. ❑

Spear of Destiny

A Wolfenstein 3D Graphic Adventure



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What the Reviewers Say!

- "the player is 'there' like no game I've ever played..."
- "the sound and the visual action, is frighteningly realistic..."
- "I can't remember a game making such effective use of perspective and sound and thereby evoking such intense physiological responses from its players."

Game by id Software. Published by FormGen Corporation, Box 279, North Andover, MA, USA, 01845-0279 (800)263-2390 (416)857-4141 Fax: (416)857-4531

Circle 39 on Reader Service Card.

By Barry Brenesal

LISTEN UP

Sound boards are sounding more and more alike all the time.

The **AdLib Gold 1000** board was the first of the low priced, comparably high-quality 16-bit sound cards. AdLib was the wave — the sound wave — that broke the dam. Everybody else came in on the flood.

Since then, we've seen the **Pro AudioSpectrum-16** and **SoundBlaster Pro 2.0**, for starters. Now there's the new **Logitech SoundMan 16**. What's the difference?

DIFFERENCE? WHAT DIFFERENCE?

Well, it isn't in most of the specs. All four cards feature the OPL-3 synthesizer chip; all offer 16-bit digital resolution, as well as SoundBlaster/AdLib compatibility. Each provides 20-voice MIDI stereo support and a 44-kilohertz sampling rate. They're all compatible with Windows 3.1 and CD-ROM Redbook specs. Three of the four let you program IRQ settings and I/O addresses through menus, rather than fiddling around with jumpers and switches. (SoundBlaster Pro's the odd man out.)

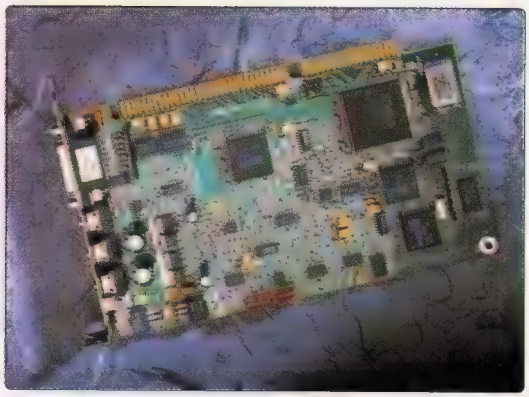
When products look (and sound) this much alike, you've got to look to other areas for the big differences: price, warranty, included software, and window dressing. But even here, the choice isn't clear.

Like the three other sound cards, the Logitech SoundMan 16 includes a MIDI interface. It can also emulate the MPU-401, which drives Roland's MIDI devices. And the 4 watts-per-channel amplifier can push 4-ohm speakers — again, similar to the Pro Audio and SoundBlaster boards.

SoundMan 16's software add-ons are a plus — not surprising, given the recent multimedia partnership between Logitech and MediaVision. Its *PAS* utility is a fairly basic DOS mixer that lets you control treble, bass, channel connections, and record and playback levels. It also offers *Real Sound*, for games that support this Access Software feature.

More effort went into SoundMan 16's two Windows 3.1 utilities, *Pocket Mixer* and *Pocket Recorder*. The first is a fancier version of the DOS-based PAS utility. It's got control knobs for master volume, treble, bass, and balance, and digitized measurements for all inputs. Pocket Recorder is a Microsoft waveform (.WAV) player/recorder/editor that lets you control sample rate, overlay files, add echo or reverb, and raise and lower pitch. (Louder/softer and faster/slower effects are possible, but are defaulted to 50 percent. A slider at smaller increments would be better — timed fades, too.) You can also use Pocket Recorder to annotate OLE-compatible application documents.

What's missing is something akin to Pro Audio's *TrakBlaster Pro* for sound/graphics intermixing. Even worse, the SoundMan 16 card doesn't include a CD-ROM hardware interface. Logitech says that would have boosted the board's price, but the Gold 1000 includes a standard SCSI interface and costs only $10 more.



Logitech's SoundMan 16

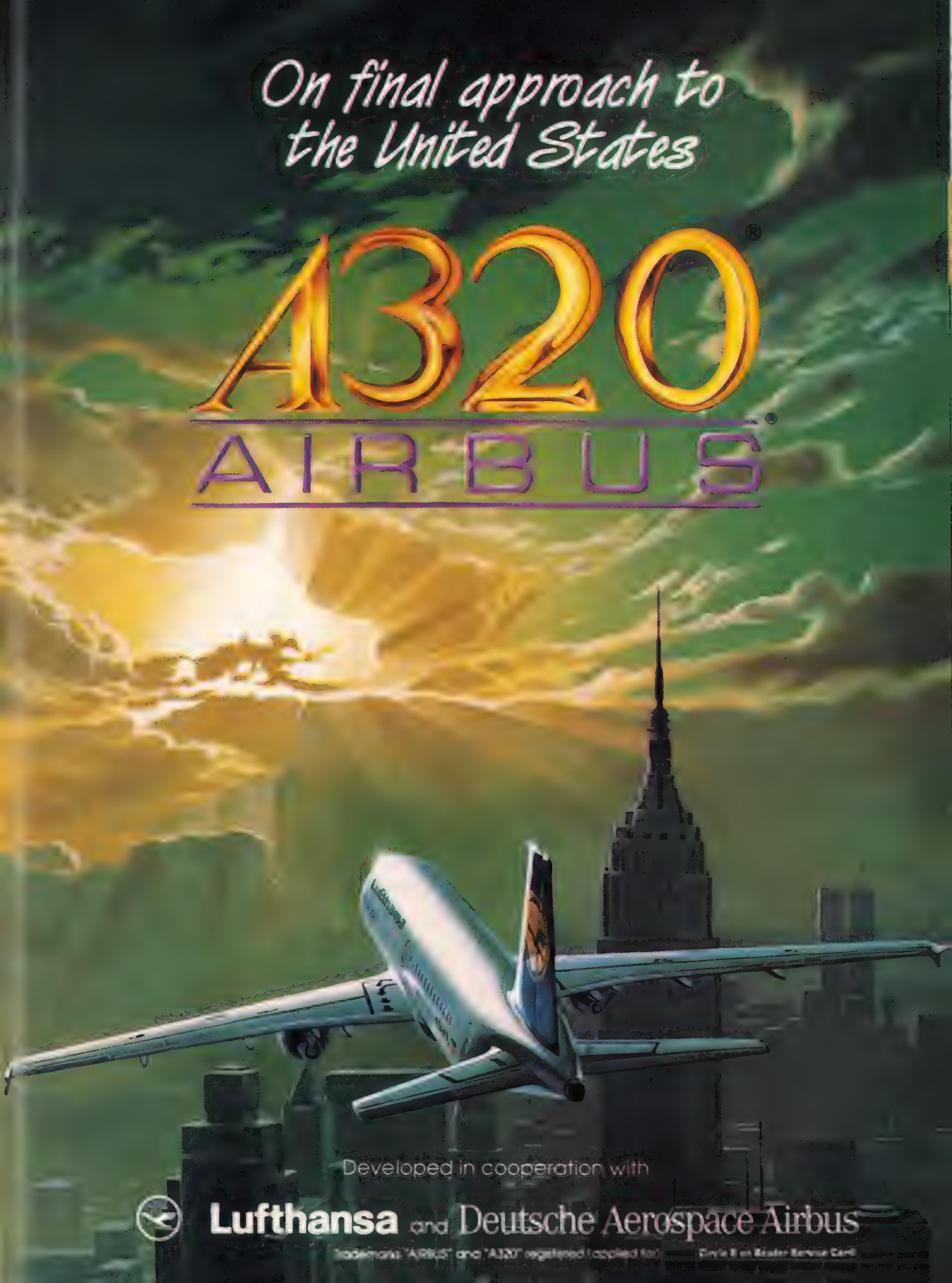
SoundMan 16's documentation is simple but effective, and the board's one-year warranty is about standard. Logitech's support, though, is anything *but* standard. It's available seven days a week, via bulletin board, fax, CompuServe, and voice phone.

My conclusion? At $289, the Logitech SoundMan 16 is a solid piece of hardware with attractive utilities at a competitive price. Assuming you don't do a whole lot of your own sound creation, SoundMan 16 is certainly a very good way to go.

THINGS TO WATCH FOR

The pre-release version of **DOS 6.0** has been available for a few weeks now. The good news is that it rectifies DOS 5.0's problem of having separate managers (HIMEM.SYS and EMM386.EXE) handling extended and expanded memory. Because one didn't know what the other was doing, that arrangement sometimes resulted in a comic mess for MS-DOS 5.0, with your computer locked up. MS-DOS 6.0 allocates extended memory through HIMEM.SYS, but it's actually doled out from a single shared memory pool by EMM386. No more conflicts.

But even this DOS update doesn't come close to a good third-party memory manager like **QEMM** or **386MAX**. But if you want your memory management and operating system in one unit — not a bad idea when you're playing most of your games in DOS — it's the way to go. For now. ❑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By Wayne Kawamoto

THE REAL THING

Virtual sports may be years away, but some games have a head start.

Someday, even the flabbiest of us will be able to play professional sports. I can't wait. Someday, virtual sports — an offshoot of virtual reality — will offer the ultimate sports entertainment. With a combination of hardware and software, and at least partially inspired by *Star Trek*'s fictional holodeck, the technology will let you go one on one against an aging Michael Jordan or swing a real bat against Nolan Ryan's ghost.

STATE OF THE ART

But before the PC can make you feel as though you're really there, it has to put the action into first-person perspective — as though you were looking through the eyes of the player. Not many sports games do that, not compared with the wave of first-person-perspective role-playing games. One that does is Electronic Arts' **4D Boxing**, perhaps the best first-person sports game yet.

It gives you a boxer's-eye view of the fight. When you take one in the face, your opponent's glove fills the screen. The rotoscoped fighters (modeled on film footage) move naturally, but still look blocky and crude. Despite this limitation and some interface flaws, 4D offers exciting fisticuffs. It's not hard to imagine a day when futuristic goggles and specially designed gloves will make it possible to turn PC boxing into a *real* knockout experience.

Electronic Arts' upcoming **World Tour Tennis** also offers impressive first-person perspectives. Here, the court changes perspective realistically as you move around, and you see your own racket make contact with the ball.

But the player's-eye view makes it tough to judge distance —you're still looking at something that's effectively two-dimensional. World Tour helps by controlling your movements initially, so all you have to do is time and place the shot. The net effect is that World Tour Tennis brings a new kind of sports gaming to the PC, and easily takes top honors as the best in digital tennis.

Other sports titles that show potential are Accolade's Olympics-inspired **Winter Challenge** and **Summer Challenge**. Both show the action from behind the athlete in excellent first-person perspectives and use a combination of polygon-filled and bit-mapped graphics. The result is smooth action amid attractive scenery.

In particular, Winter Challenge shows what may someday be possible in virtual cross-country skiing, bobsledding, and skiing. The next logical step is to remove the bit-mapped athletes from the screen and adapt the computer and joystick control to a Nordic Track or downhill-ski simulator (along with a big fan and lots of plastic snowflakes). You could scream down the slope, wind blowing in your face, or get a cross-country workout.

4-D Boxing's view from behind the swollen eyes of a fighter.

CHALLENGE FOR THE FUTURE

Skiing and boxing are particularly well suited for first-person perspectives because you're usually looking straight ahead. But other games demand more flexible views. As in flight simulators, one of the challenges in making a first-class first-perspective sports game is to "turn" your head easily to see the action. Although you can push a key to change the view in a flight simulator, it's slower than turning your head in real life. If it's a pain in a virtual cockpit, imagine playing virtual quarterback as you try to avoid the rush while pushing keys to look for your open receiver.

Then what's the next step? How about adding the physical aspects? But how do you translate the cutting movements necessary to run a pattern in football, or make those graceful moves you'll need to go inside for the hoop? Sports-software and hardware designers have some real challenges ahead of them.

If we finally get convincing you-are-there sports action on the field, what's next? Simulating the ice-cold sensation of Gatorade pouring down on your head? The smell of the locker room? On the virtual court, on the electronic track, on the digital field of dreams, anything will be possible — someday. ❑

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* HEY, IT WORKED ONCE! *This cover in 1973. We're happy to report the dog died of natural causes.*

Continued from p. 33

unlikely candidate for this assortment of quests, which culminate in the search for a range of oddly named semi-mythological objects and a kidnapped princess.

It's not the sort of thing to inspire gales of ho-ho-ho boardroom laughter — more a conspiracy of gentle chuckles. The game has a quiet, purposeful confidence, and you'll invariably leave feeling slightly tickled, no matter how knotty the puzzle. Computer games often leave us feeling exhausted and frustrated, so a game that makes us feel buoyant, even for a little while, is something to be treasured.

Nor are the puzzles too tough, at least until *Day Six*. (There are eight.) No doubt that's owing to the logic of their solutions — which will elude you just long enough to be interesting — and to the Popeil's Pocket Fisherman-like size of each of the eight regions in the game. The disadvantage, of course, is that no sooner has Bates established the mood on one day than he abandons it for the next, and, hence, like Timequest, this bits-and-pieces approach means Eric doesn't have much flow.

Moreover, Legend's vaunted point-and-click interface has improved subtly with augmentation of the verbs and nouns columns. This turns the verbs column in particular into a *de facto* on-line hint book. One further suggestion: Lose the *Help* gadget and install *Save* and *Restore* buttons in its stead. It's the only thing still inconvenient about navigation.

HENNY YOUNGMAN IN CHAIN MAIL

There's one other change, and, though it may work for you, it didn't for me. Eric the Unready shows a separate screen and a menu of choices for conversations with other characters. This device doesn't add anything. They're not dialog trees along the lines of those used in LucasArts' graphics adventures — would that they were — but call-and-response one-liners, whose cumulative effect is to make the game's conversations seem fixed and prescribed. There's none of the fun of experimentation and discovery.

Perhaps the intent was simply to generate as many types of interaction as possible. After all, the trouble with text adventures, in a sense, is that they're just text adventures — a lot of the same kind of thing in one place. That's scarcely a concern here, though, as Eric will get to play variations on *Jeopardy* and *Concentration* and read a ridiculous daily tabloid.

It's all perfectly enjoyable, and nothing particularly new. That's not necessarily a criticism, but it simply states that in the wake of the company's own Gateway — which was delightfully un-text-adventure-like — you might expect Eric to be a bit more daring. Funny? Sure. A new routine? Not quite.

1 2 3 4 5 6 7 8 **9** 10

Legend Entertainment, 14200 Park Meadow Drive, Chantilly, VA 22021, (800) 658-8891, (703) 222-8500; IBM PC or compatible, 640K RAM; EGA, VGA, SVGA (VESA-compatible); supports AdLib, Roland MT-32, SoundBlaster, RealSound; requires hard-disk drive, mouse recommended; $59.95

TONY LARUSSA BASEBALL II

By Dan Muse

Tony LaRussa Baseball II got here just in time — late February, between yet another pair of New England snowstorms. With major leaguers just reporting to spring training, the shrink wrap came off this sequel fast.

If you're familiar with Tony LaRussa's Ultimate Baseball, you'll notice that Tony II retains its predecessor's overall feel, but boasts several improvements. If you didn't catch Tony before, you'll be wowed by this new version's combination of baseball arcade action, sophisticated managerial options, and attention to detail. Tony LaRussa Baseball II moves to the top of the baseball-simulation stat sheet.

Tony II sports a spruced-up interface.

NOT JUST ANOTHER PRETTY FACE

Tony II's developer, Stormfront Studios, refined the game's user interface, enhanced its graphics feel, and actually moved the title into today's technology by upping the resolution to VGA and adding compatibility with a healthy range of sound boards.

The hub of Tony II is its main-menu bar, from which you can run the game via pull-down menus. Function keys and a variety of hot keys, though, speed up the action. When the batter/pitcher menus are displayed, for instance, you can hit the N key to show your current defensive alignment or the T key to display your batting order.

In addition to a spruced-up graphical user interface, Tony II features several extras, such as animation and video sequences. When you or your opponent hits a home run, you're in turn rewarded and tormented with a video animation of a player taking a mighty cut. Meanwhile, a large scoreboard — a DiamondVision-style screen similar to those so common in today's ballparks — tells you how far the ball traveled.

THE BIG LEAGUE

As with the earlier version, Tony II uses rosters of players compiled from a team's history. (Tony II includes a bonus disk with great teams from 1908 to 1968, something that was available only as an add-on to the first Tony.) Pick the San Francisco Giants (my favorite) and you manage a host of players — from Mathewson to Mays. Although this dream-team approach is intriguing,

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Eye III is an assault on your senses, with three times more cinematic intermissions and five fully-scored music pieces. Plus the ability to import your favorite characters from Eye II, along with weapons, treasure and experience levels.

The way the developers of Eye III see it, if you're going to go out, you might as well go out in style. Who knows, 40-100 hours later, you might just see the light at the end of Eye III. Then again, you might not.

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IBM 256-color VGA displays

other PC sports fans may be more interested in current rosters. If you want to keep your cleats a little closer to the ground, SSI's 1992 team disk should be available by the time you read this.

FANTASY SEASON

Tony II can simulate a complete season, something that lets you play "what if" scenarios to see how notable historical teams would have fared if you could time-travel and combine stars from different eras.

During a six-season test run, the teams that would have dominated this baseball fantasy world became clear. In the National League East, Chicago and St. Louis each took three divisional crowns, though the Cubs were much more successful in post-season play, winning two World Series titles. (That's right, the Cubs won two World Series, and with Bill Buckner on the roster — go figure.)

The Giants dominated the National League West, winning four of six divisional titles. The American West, the weakest of the four divisions, was no contest: The Oakland A's won five of six, and in fact were the most successful team, taking three world championships. But the American League East had the biggest surprise: The Cleveland Indians, not the Yankees, took the crown five out of six times.

You can simulate the season through a particular date, choose to play the entire regular season and take control yourself in the playoffs, or play through the playoffs and take control in the World Series. Other improvements let you run multiple leagues and expand a team's roster to 40 players after the first of September — just like in the major leagues.

TAKE CONTROL

If you want to get past baseball's cerebral aspects and throw a few 90-mph fastballs and take a few swings, you can play with joystick, mouse, or keyboard. A joystick really is a necessity if you want to play the game on its most arcade level.

Tony II breaks control into three categories: fielding, throwing, and base running, any or all of which you can hand to the computer to control. A good mix is to let the PC handle fielding while you deal with the throwing, managing, and base-running decisions.

Fielding in Tony II is arguably the most sophisticated of any PC baseball title. To simulate judging and catching fly balls, the game sticks with the method seen in the first Tony. When a ball's hit in the air, a white circle appears on the field; the higher the ball, the bigger the circle. On high pop flies, it's easy to position your fielder to make the catch. A line drive yields a smaller circle, though, making it almost impossible to catch the ball unless it's hit right at your fielder. Kudos go to Tony II for keeping this realistic technique.

EXTRA INNINGS

All this comes at a price. Sports-simulation system requirements have jumped almost as fast as the salaries of major-league ball players, and Tony II is no exception. You'll need about 15 megabytes of hard-disk space and a little more than half a megabyte of free RAM.

Sports simulations such as Tony LaRussa II are deep products that combine today's advances in video, graphics images, and sound with artificial intelligence. This simulation may be overkill if you're only after a Nintendo-style baseball quickie. But if you enjoy the intricacies of the sport as much as the joystick jockeying, you won't find a better baseball simulation than Tony LaRussa Baseball II.

1 2 3 4 5 6 7 8 **9** 10

Strategic Simulations, Inc., 675 Almanor Avenue, Sunnyvale, CA 94086-2901, (408) 737-6800; IBM PC or compatible, DOS 5 or later, 1MB RAM, 2MB recommended; VGA; supports AdLib, Pro AudioSpectrum, Roland, SoundBlaster, SoundBlaster Pro; requires hard-disk drive, 15MB free space; $59.95

VEIL OF DARKNESS

By Brad Dixon

Banshees and bats, ghosts and ghouls. It's not Halloween — that dark night months away from sun-drenched days at your favorite beach — but it's not much further than Veil of Darkness, SSI's entry into the horror business.

Replete with terrific VGA graphics images, free-running animation sequences, and a score that changes with every scene, Veil of Darkness keeps you on the edge of your seat

Veil of Darkness brings you creepy fun.

for hours, though they'll flash by like moments. This may not be Clive Barker, but it's enough to give you the creeps.

NAIL THE COFFIN SHUT

In this real-time adventure with an overlay of horror, you step into the shoes of an unsuspecting young pilot of a cargo plane forced to crash-land in a fog-enshrouded Romanian valley. Modern aeronautic disaster isn't the last nasty thing you'll experience, not when you've ended up in the land ruled by Kairn, Prince of Csarda, omnipotent vampire.

As in any adventure game worth the name, you'll have to find tools, weapons, and other items of value to continue your quest. Here, though, you're battling armies of evil entities whose only goal is to wreak havoc among the villagers and destroy you in the bargain. You'll encounter Kairn in his castle eventually, but be patient, and develop strength and prowess before you tackle the vampire in his lair.

Although you can use the keyboard

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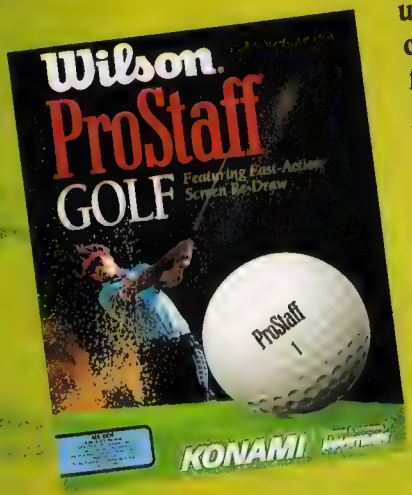
You know what we're talking about... those *other* golf simulations that seem to take forever to draw the screen. Well, *Wilson® ProStaff® Golf* puts an end to all that waiting with *fast-action* screen redraws! So what does this get you? Faster game play and less frustration, for one thing. Need we say more? O.K., since you asked, we should also mention the wide variety of side-game options — things like Shoot Out, Stroke Play, Match Play and Best Ball. You get a whopping ten options in all to customize your round... simply pick and choose to create your own personal playing style.

Wilson® ProStaff® Golf is an ideal game for golfers of all levels, from beginner to expert. Making a shot is quick and easy — just select a club and adjust your stance, take aim, then choose your power level and ball spin and watch it fly! An undulating grid shows every curve and contour of the fairways and greens, for greater accuracy as you plan your shot. Finally, one game brings it all together to give golfers what they've been looking for — a challenging course, intuitive controls and realistic game play. So don't get teed off at the competition, go with a real winner... *Wilson ProStaff Golf.*



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7TH HOLE

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to play Veil of Darkness, you're better off operating the interface with a mouse. As you move your character around the screen, you view the action from an above-the-ground, three-quarter perspective. Combined with some rich graphics details, this 3-D effect draws you right into the action.

Puzzles — always an integral part of a graphics adventure — are both frustrating and intriguing. Pay particular attention to the many non-player characters that inhabit Veil of Darkness; interaction and conversations with them will lead you to all kinds of clues. In fact, many clues are hidden in the text-based conversations you'll have with these computer-run actors. You can often get more information from a non-player character simply by repeating some words from his or her speech.

Other software bells and whistles help make Veil of Darkness a quality adventure, one especially appropriate for older players. The soundtrack follows the scenes perfectly, from light music that plays when you enter a sick girl's room to Gothic-sounding tones that play when you walk into the monastery. Mysterious sound effects pile on, too, such as the cries of a werewolf from up in the hills or the bumps that come from behind the doors in a long hallway.

SEVEN ON THE SCARE-O-METER

The topic and tone of Veil's story line leans toward the adult — there's violence here. Depending on what fighting level you choose to play, you may see battered bodies and bones scattered throughout the valley by the time you get to Kairn's castle for the showdown.

The game's most obvious weakness is its lengthy documentation. Fully half of the 63-page booklet is devoted to a background story of the valley and how the vampire Kairn evolved. Although the story adds some flavor and setting to the game's premise, it's overdone, indeed tedious. You're better off laying it aside and getting right to the game.

In the end, though, it's the scare-o-meter that decides the issue. Veil of Darkness is a good pick for a dark night when the wind's howling under the eaves and the cat's twitching nervously around the room — even if it *is* summer.

There's nothing like killing a vampire and winning the hand of a fair maiden to wile away the hours when gaming's in your . . . blood.

1 2 3 4 5 6 7 8 9 10

Strategic Simulations, Inc., 675 Almanor Avenue, Suite 201, Sunnyvale, CA 94086-2901, (408) 737-6800; IBM PC or compatible, 286 or faster; VGA; supports AdLib, Roland, SoundBlaster; requires hard-disk drive, 8.5MB free space, mouse recommended; $59.95

SOLITAIRE FOR WINDOWS

By Mark E. Reynolds

Most attempts to move classical board games or card games to the PC come up as short as a bounced check.

Solitaire for Windows is graphically handsome.

You might hone your skills by matching wits with a good chess program, but when you want to play chess, you look for a human opponent. And what fun is it playing poker against a computer? You've got to sit around a table with three or four guys whose characters are at least as disreputable as yours before the game even begins to get interesting. Naw, ain't nothin' like the real thing.

Until Interplay's Solitaire for Windows, that is. This is one thoughtfully crafted PC game. Given the choice, I'd take this one over a deck of cards anytime.

But why even buy a Windows solitaire game? You've already got the one that came free, right? Why would you want a Porsche when a Hyundai's cheaper? If you don't care to play anything but the standard *Klondike* variation, Windows' freebie will suit you just fine. But if you want a lot more variety and mental exercise, Solitaire for Windows is so far ahead there's just no comparison.

DEALER'S CHOICE

First, Solitaire for Windows is graphically handsome. The cards are displayed in crisp detail and bright colors. The screen looks good.

More important, Interplay's package lets you kick out *Klondike* and pick one of 11 other one- and two-deck game versions, everything from *calculation* and *corners* to *scorpion* and *spider*. The games range from the fairly easy and fast-moving, like golf, to much more difficult challenges, such as *three shuffles and a draw*. When you've played a version until you think you've got it down and you'd like a bit of variety, switch to its alternative rules and see how you do. They're different for each game, of course.

Besides offering a dozen games, Solitaire for Windows also gives you a choice of a dozen deck styles, ranging from traditional designs and colorful Mayan-influenced patterns to modern geometric motifs. Still not enough variety? You can choose from a virtually infinite number of playing-surface designs and colors: floral, Celtic, and $100 bill backgrounds among them. You even can modify the solid-color field by mixing red, blue, and green to create more shades than you'll find in the biggest box of crayons.

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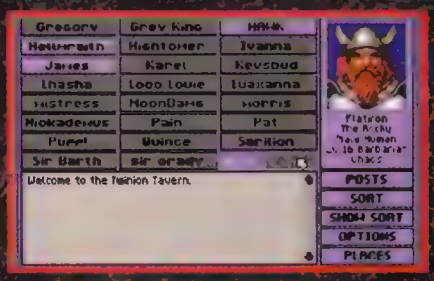

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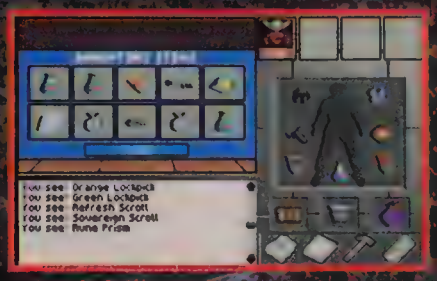

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Solitaire for Windows also keeps the door open for future modules so that you can add games, boards, and decks as they become available.

When playing these dozen games gets to be old hat, you can go on the tour circuit, in which the computer presents you with a series of different games. In *Grand Tour* you'll have to face each of the variations. *Championship Tour* is similar, but tougher, because you can't alter the rules, scoring, or timed play, nor can you stop once you've started. *Golf Tour* offers nine consecutive games of golf solitaire. *Custom Tour* lets you create and save your own tour.

If you really want to work on your solitaire skills, Solitaire for Windows lets you save games, replay hands, and record your scores, so that you can try different strategies under identical circumstances. It's a great way to test your card-sharp quotient. You and a friend also can play the same hand to see who scores higher.

Solitaire for Windows' designers have built a surprisingly unobtrusive copy-protection scheme into the package. The first time you boot it up, the software asks you to type a word on a page in the manual, but that's the last time. Once the program is assured you're playing with a legitimate copy, you don't have to deal with the copy protection again, unless, of course, you switch machines or change your configuration. Until then, you can put the manual away, because the rules for each game are available through on-line help screens — another nice touch.

As long as you're working in Windows, why not play there, too? After you've played Solitaire for Windows, you'll wonder how you ever stood the freebie. Solitaire for Windows is better than the real thing.

1 2 3 4 5 6 7 8 9 10

Interplay Productions, 17922 Fitch Avenue, Irvine, CA 922714, (714) 553-6678; IBM PC or compatible, 286 or faster, Windows 3.0 or later, 2MB RAM; requires hard disk; supports Windows 3.1-compatible sound boards; $49.95

COBRA MISSION

By Ed Ferrell

Part *Debbie Does Dallas*, part Japanese cartoon, part pure smut — seems a strange combination for a PC game.

That's the short version of Megatech's Cobra Mission, a sexually graphic role-playing game that carries an over-18-only rating slapped on by the publisher, not Jessie Helms. It's natural, of course, that the warning guarantees underage peeking.

That's probably just as well. Whether it was intentional or not, Cobra Mission appeals to those adolescents with raging hormones or to those adults still stuck in adolescence. But much of it won't appeal to anyone.

HEY, SAILOR

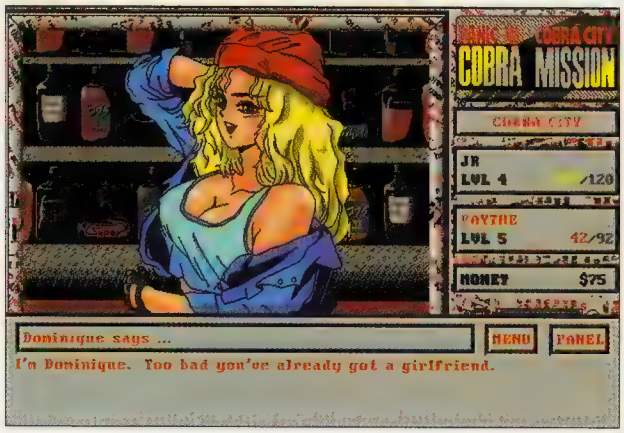
In this conversion of a popular Japanese computer game, you play (and I use the word loosely, as you'll soon see) the role of an oversexed private investigator trying to free kidnapped women from Cobra Island. You may fight thugs and gang bosses on your mission, but your rewards are a lot more base — the raw gratitude of the young women, who are shown in high-resolution graphics images, accompanied by moaning sound effects and tawdry dialogue.

Frontal nudity abounds in Cobra Mission. Drawn in the Japanese adult-comic style of anime, the sexpot graphics images portray lightly clad women, each with a small nose, a small mouth, big eyes, big hair, and big breasts. Almost doll-like, the women sport brightly dyed hair in blue, orange, and other tints. I don't think Clairol had anything to do with this.

Each screen of sexcapades displays these Virtual Valeries in various cheesecake positions (including some athletic poses). Often, they reflect attitudes of submissive, willing languor.

"All graphics are done in good taste!!!" claims Cobra Mission's advertising department, but that's up for debate. I'm not going out on a limb here when I say these images won't get a grin from women.

Such sexual encounters are the rewards for success in Cobra Mission. Yes, there is a game here. You travel around Cobra Island in a low-resolution, Nintendo-style map flush with houses, shops, and bars, learning what you can by walking up to the locals and reading their dialog boxes.



Sexism and rude humor are the basis of Cobra Mission.

This isn't state-of-the-art role playing.

The Island is overrun with gangs of karate masters and thugs, as well as more unusual foes, such as the Muscle Crow, Aerobee, and Street Killer. Combat is inevitable, and once you come upon an enemy, the screen changes to a high-resolution graphics image of your attacker. You must place your weapon quickly over a vital spot on the enemy's body by moving the mouse.

Using the appropriate weapon for each attacker betters your battle odds, so you're smart if you buy plenty of hardware early. You never know when a bullwhip, baseball bat, or metal pipe will come in handy. Cobra Mission's arcade combat is a snap to master; even when it's not, tear gas and poison darts drop almost anybody.

If you're not satisfied with sex and violence, Cobra Mission tosses in drug abuse, too. You can boost your energy level during a tough fight by taking

a Vitamax tablet — part pain killer, part amphetamine, part steroid. To be successful in this game, you just gotta say yes.

BOY MEETS GIRL, BOY GETS CANDLE

All this is just a veneer. The real reason boys will play Cobra Mission is to get to the girls. Liberate a girl from the evil Kaiser's hands and she'll give you her phone number. Call her up, make a date, and see whether you're half the lover you think you are.

You'd better know all about the birds and the bees before you play Cobra Mission — you won't learn it here. You and the girl go to a hotel room where progressively more revealing screens and steamy dialog encourage your desire. It gets even weirder as you pick tools for your love-making chores. Select hands or lips, and the cursor changes into like-minded icons you then place on part of the woman's digital body.

Though the nudity is as revealing as a G-string, that's not the problem, even though the wisps of clothing don't leave much to the imagination (unlike the prudish Japanese version, where colored mosaics hide the flesh below the waist). The problem is the combination of arcade-style sex and a changing cursor. It's rude, crude, and mean-spirited.

Some *PCGames'* readers may be offended by a candid description of this cursor, so I won't go into much detail. But I do want to warn you that it actually transforms into a variety of sexual tools that you use on the female graphics images. This part of the program especially — and indeed the entire program — demeans sex itself and promotes a philosophy that women are simply objects. As a cultural curiosity, Cobra Mission reflects what the designers think will arouse male fantasies. The nude graphics images may satisfy the erotic interests of many, but the pointless arcade sex is soon exposed as disgusting.

Losing something in the translation, Cobra Mission's dialog is full of puzzling grammatical errors and hilarious mistakes. Sexism and rude humor pepper the story, even though the manual describes the game's sexploitations as straight out of the *Kama Sutra*. They're more likely pulled from the walls of junior-high-school bathrooms.

This frivolous game doesn't provide much pleasure. The violence is gory and graphic, there's no mention of safe sex, and the game itself is less than challenging. This one's geared for immature, unsophisticated, underage minors. Take a little advice, pal: Pass on making passes at these *faux* women, and take a pass on Cobra Mission.

1 2 **3** 4 5 6 7 8 9 10

Megatech, P.O. Box 11333, Torrance, CA 90501, (310) 539-6452; IBM PC or compatible, 386 or faster recommended, 640K RAM; EGA, VGA, MCGA; supports AdLib, Pro AudioSpectrum, SoundBlaster, SoundBlaster Pro, Thunderboard; requires hard-disk drive, 11MB free, mouse recommended; $79.95

DINOSAUR ADVENTURE

By Cynthia E. Field

You didn't spend all that money on a PC just so your kids could play games. You had a grander idea in mind when you plunked down cash. You wanted a PC in the home to help your children stretch their minds, maybe even do better in school.

During the past few years, software publishers eyeing this potentially lucrative market have tried to produce programs that educate and entertain simultaneously. Tall order — no wonder many of these programs put the emphasis on fun and games, while education just creeps in. Memories of boring drill-and-practice tutorials still haunt publishers and players alike. But while today's so-called *edutainment* software is fun to play — and fun to review — it's refreshing to find a developer that takes a different tack.

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PANGAEA
Looking down on earth from space 200 million years ago, you would have seen a very different world.
Instead of the familiar continents, you would have seen one super-

In Dinosaur Adventure these thunder lizards are beautifully painted, framed, and displayed.

Knowledge Adventure does. Even the company's name tells you something about its priorities: Learning comes first, fun second. But it's a close second.

Nothing proves the point better than its new Dinosaur Adventure, a multimedia extravaganza that doesn't demand a multimedia PC or even a CD-ROM drive.

BUTTONS MAKE THE MONSTERS ROAR

Dinosaur Adventure is a comprehensive, interactive look at the rise and fall of the thunder lizards. Children as young as 3 can click on program buttons with the hand-shaped pointer to listen as the computer reads a story aloud, play a dinosaur matching game, or explore the earth's landscape 250 million years ago. Move the pointer around the screen and information-filled bubbles pop up to encourage free-form experimentation.

Scenes depicting dinosaurs are beautifully painted, framed, and displayed on the 256-color VGA screen. With all due respect to Barney the purple dinosaur, no cartoon dinos need apply for work in this interactive book. Knowledge Adventure consulted with scientists in an attempt to re-create realistic settings.

A time line stretched along the bottom of the screen is linked dynamically to the main scene. With a single click you can launch an adventure that takes you millions of years into the past — or back to the future — depending on your starting point. The program provides each dinosaur's size and weight as well as information about its lifestyle and eating habits. A scrolling text box reveals additional information related to the current scene. For example, you can read contemporary theories about the dinosaurs' demise or tales of fossil discoveries.

A dozen buttons arrayed across the top of the screen offer access to Dinosaur Adventure's activities and control its functions. You can venture off to learn more about the Big Bang theory, for instance, or view pictures of other prehistoric creatures, such as the woolly mammoth. Click on the appropriate buttons to hear music, sound effects, or digitized speech; click on others to see images move or to create a printout of the accompanying text.

You can research information in other ways, too. Click on the *compass-rose* buttons to spin a globe, then zoom in for a closer look at a fossil site or zoom out for the sights from space.

When you punch the *books* button, an old-fashioned library card catalog — complete with wooden cabinets and paper cards — appears. You can click on the appropriate letter of the alphabet to pull its drawer and search for information on interesting subjects. Hit the C drawer, for example, and you can scroll through a series of topics, including *Cambrian, Canada, Canyon, Carboniferous,* and so on. You can click on any subtopic to learn more.

REX AT THE ROXY

Among Dinosaur Adventure's unique offerings are a half-dozen mini-movies you can play on your PC, turning your kids' computer into a home version of the Roxy Theater. Knowledge Adventure collaborated with Dinamation International Corporation — makers of dinosaur simulations shown at parks or zoos — to film the animatronic lizards in actual settings. If you want to watch a full-motion clip featuring a Tyrannosaurus, say, all you have to do is click on the *T. rex* button on the theater screen.

GETTING TECHNICAL

Knowledge Adventure may claim that Dinosaur Adventure works on "an average home or school PC," but the movies look like flip-book animations on a 16-megahertz 386SX PC, a system found in many homes and classrooms. On a faster (and more expensive) 486/50 machine, the action was unhesitatingly smooth and realistic.

A substantial portion of the User's Guide is devoted to *Appendix B: Commonly Asked Questions*. More than three pages discuss sound devices. But even after following the instructions on modifying Dinosaur Adventure's KA.CNF file, I couldn't coax anything from a supported MediaMaster sound board. Both an AdLib card and Disney Sound Source worked fine, though.

Despite slow video and potentially frustrating sound-card configuration steps, Knowledge Adventure has done what no other publisher has been able to do: create multimedia — albeit imperfect multimedia — for the stock PC. In short, Dinosaur Adventure offers children the opportunity to explore science in a way no printed book can.

Is it enriching? Certainly. Is is fun? You bet. Dinosaur Adventure works in both worlds.

1 2 3 4 5 6 **7** 8 9 10

Knowledge Adventure, 4502 Dyer Street, La Crescenta, CA 91214, (800) 542-4240; IBM PC or compatible; VGA, SVGA; supports Adlib Gold, Pro AudioSpectrum, SoundBlaster, Sound Source; requires hard-disk drive, 5MB free space, mouse recommended; $49.95

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The Bad...

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ECOQUEST II: THE LOST SECRET OF THE RAINFOREST

By Wayne Kawamoto

Sure, Superman fought for truth, justice, and the American way. But what has he done for us lately? (Except die a comic-book death.) He never fixed the real problems, like pollution, the ozone layer, or overpopulation. A true hero he's not.

But Adam Greene is. This planetary protagonist of kid-sized proportions fights for truth, justice, and Mother Nature — not in comic books, but in Sierra's EcoQuest II: The Lost Secret of the Rainforest.

Geared toward kids older than the audience for the first title in the conservation-bent EcoQuest series, this program manages to offer an entertaining game that's not too heavy-handed or obnoxiously politically correct. But though Rainforest features solid game play and first-rate graphics images, animation, and sound, it lacks the charm of its predecessor, EcoQuest: The Search for Cetus. Adam has grown up, and the series has matured with him.

EcoQuest II: The Lost Secret of the Rainforest sports impressive graphics images and a strong interface.

KIDS GROW UP, GAMES DO TOO

The ecosystem is in trouble (surprise!), and it's up to Adam (that's you) to stop the exploitation and destruction of the rainforest. While assisting his dad in South America, Adam gets involved inadvertently — kidnapped by two goofy otters, no less. His task is to look for a seedling requested by the Forest Heart, an ancient talking tree who acts as the rainforest's soul.

The seedling is vital — it'll ultimately replace the dying Forest Heart. Also ensnared in the plot is a ruthless corporation (is there any other kind in these games?) bent on exploiting the rainforest. In a story reminiscent of *Bambi*, humankind is wreaking havoc and endangering the future of the forest.

Along the way there are puzzles to solve, including dousing a fire that threatens a bird's nest, opening doors, and getting past brutal insects. The puzzles, particularly the later ones, challenge youngsters and adults alike.

During the adventure, you'll also climb trees, explore the rainforest, talk with otters, visit a native village, fly with an eagle, look for the lost city of gold, and converse with a shaman. Don't forget to pick up garbage for extra points. You'll be accompanied by Paquita, a bat who can tell you interesting facts about the jungle. Put all the pieces together, and you'll save the environment.

One of Rainforest's notable features is an *ecorder* — a device that's part database and part measuring instrument — that you'll use, Star Trek tricorder-style, to identify different forms of pollution and find out more about the forest's indigenous animals, plant life, and human civilizations. EcoQuest takes time out to show you how to use the device. (Adam's dad talks you through it.)

The game's 256-color graphics images are topnotch. Minute details, such as shimmering reflections in a pond and glittering forest lighting, are nice touches. During the game, Adam climbs through a maze of branches, crawling, shimmying, weaving, and balancing throughout. It's impressive.

The interface is just as strong, as it relies on Sierra's time-tested icon-based controls. Still, it's apparent that something got lost in the translation from EcoQuest I to II; Rainforest lacks the whimsical free spirit of its predecessor. The Search for Cetus had an underwater theme and featured a cast of lovable characters. In contrast, Rainforest's setting just can't match the intrigue of Cetus' beneath-the-waves adventure.

More unfortunate is the game's stereotypical portrayal of South Americans. Officials accept bribes readily and sleep on the job, vendors are on breaks constantly, and others are scheming and stealing. In fact, a stolen suitcase is the plot device that separates Adam from his father, so that he's free to travel to the rainforest. Although this kind of depiction is regrettably par not only for most computer games, but also for many movies, it would be nice to see some positive characterizations. After all, this is a game aimed at impressionable young people.

THE LINE IS FINE

Compared with the parts in which Adam is captured and tied up, cutesy things such as talking otters, bats, and birds seem somewhat out of place. In fact, pieces of Rainforest feel more like an adult game (Sierra's own Space Quest, say) than a kids' game like EcoQuest I. Sierra rides a fine line here — to play, a child has to be an accomplished reader, but if the program is too cute, it will only turn off older, more sophisticated kids. Even Adam himself has grown. In EcoQuest I he seemed to be between the ages of 5 and 7. In EcoQuest II, he seems to be 10 or 11. The program's designers even drew him as more sophisticated — sort of a hip Johnny Quest for the '90s.

The Lost Secret of the Rainforest succeeds as a solid program for

youngsters, but it's not up to the standards or whimsy of the first in the series. If you played and enjoyed The Search for Cetus, be prepared for a new attitude.

1 2 3 4 5 **6** 7 8 9 10

Sierra, P.O. Box 485, Coarsegold, CA 93614, (800) 326-6654; IBM PC or compatible, 286 or faster, 640K RAM; supports AdLib, Roland, SoundBlaster, Sound Source; requires mouse, hard-disk drive; $49.95

POPULOUS II: TRIALS OF THE OLYMPIAN GODS

By Barry Brenesal

Father of the Gods they called him, and snickered, because Zeus liked to play the field among mortal women. A slew of offspring deities — all bearing a striking resemblance to the Big Guy — was the result. Call it Gene Pool of the Gods.

But don't laugh — because you're one of Zeus' brats in Populous II: Trials of the Olympian Gods, a sequel to the classic from Bullfrog. This second try is just as much fun, even bigger, and a lot easier to grasp. A Zeus-sized thumbs up, with a couple of caveats.

WORLDS R US

Don't let godhood give you a jumbo ego. You may be a god, but you're still stuck on Earth, while all the really important deities live up there with Dad on Mount Olympus. Oh, he'll let you in. But first you'll have to face and defeat 32 other gods (including Zeus himself) in a host of worlds.

How many worlds? If you liked the enormous challenge of 195 scenarios in Bullfrog Productions' PowerMonger, you'll love the 1000 increasingly difficult settings in Populous II. I think it's unfortunate, though, that you don't have to play in every one. Zeus rates your performance after each victory — you and

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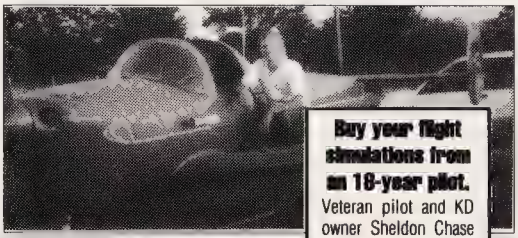

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Populous II: Trials of the Olympian Gods is colorful, imaginative, and perpetually challenging.

your former enemy's respective populations, magic use, battle successes, and defeats. Depending on what he sees, he may move you on to the next world or jump you ahead four, seven, or even 15.

That's pretty ingenious. It keeps Populous II perpetually challenging, while never quite pushing you beyond your limits. Things never get boring, either. The different gods you face use varying tactics and powers, and magic varies from world to world, too.

The colorful, imaginative screen controls are familiar immediately if you've played either Populous or PowerMonger. An isometric-perspective main map gives you a close-up view of settlements and battles. You can scroll to examine other locations or right-click on the miniature world map above for larger jumps.

One set of buttons controls game options and general directives to your adoring worshippers (*settle*, *fight*, *consolidate*). Another group invokes your special powers, divided into six categories: *People*, *Vegetation*, *Air*, *Fire*, *Water*, and *Earth*. Summon storms, raise volcanoes, spread the plague, renew damaged land, build roads, or erect city walls and bridges.

You can even create heroes that divide in two when attacked, or design baptismal fonts that change an opponent's followers into your folk. As your people expand their territories and numbers, they'll build more advanced dwellings. The more there are of them, the more magic weight you get to throw around — kind of a SimCity for megalomaniacs.

You also can create your own worlds in Populous II, controlling every facet from terrain type to the smarts of your computerized opponent. You even can play these scenarios between two human opponents, using a modem or a null-modem cable. There's only one restriction: You can't incorporate a magic power you haven't been granted yet in the basic 1000-world challenge. (Zeus probably doesn't want you to get too good on the side. After all, you want to really earn that Mount Olympus condo, don't you?)

MO' MEMORY

Good as Populous II is, there's room for improvement. Some of the money the company spent on the unusually large game box (nearly all of it is empty space) would have been used better on the documentation. It's Electronic Arts' standard digest-sized manual, with tiny black-and-white pictures (they call them pictures — I call them smudges) that make deciphering the command icons a joke. Thank goodness you can save a game, try out everything, then reload.

The other problem is memory related. Populous II requires expanded memory — 272K for low-resolution VGA, 1040K for high-resolution EGA — understandable given all the animation. The unpleasant surprise comes when you try to run this game in high-resolution 16-color EGA mode with an AdLib/SoundBlaster-compatible card. Forget it, unless you can scrape together a whopping 618K of conventional memory. Even the best memory manager will be hard pressed to come up with that amount.

But memory requirements and docs aside, Bullfrog is on a roll. Populous I was a substantial success, deservedly so, and PowerMonger was bigger, more interesting, and more varied. Populous II may lack PowerMonger's alliance option with computer-driven opponents, but its roll-your-own-world feature will keep you battling in this one long after Bullfrog finishes its next game.

1 2 3 4 5 6 7 8 9 10

Electronic Arts, 1450 Fashion Island Boulevard, San Mateo, CA 94404, (415) 571-7171; IBM PC or compatible, 386 or faster, 640K RAM, 272K-1040K EMS, DOS 3.3 or later, DOS 5.0 recommended; VGA; supports AdLib, SoundBlaster; requires mouse, hard-disk drive; $59.95

QUARKY AND QUAYSOO'S TURBO SCIENCE

By Cynthia E. Field

So Barbie isn't a math whiz. Was anyone surprised? G.I. Joe isn't, either. Kids of either gender usually groan at the mere mention of the word study, much less when it's connected to difficult subjects such as math and science. It's tough to make topics such as matter and energy exciting for the MTV crowd.

Even so, familiarity with physical science is essential for daily living. Just try rewiring a lamp fixture, understanding a car-repair estimate, or finding ways to reduce the impact of President Clinton's energy taxes. Without some scientific know-how, we'd be lost. It's fortunate that learning science doesn't have to be a pay-now-or-pay-later dilemma, as Sierra's Quarky and Quaysoo's Turbo Science ably demonstrates.

RACE THE FACTS

This always-lively, often-wacky, sometimes-irreverent game can make physical science snap, crackle, and

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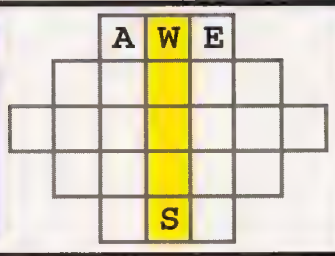
You know the drill: In this contest you don't rely on the luck-of-the draw. You determine if you win or not. You win by outscoring others in a game of skill. If you can add numbers, do crosswords and have persistence, then you have what it takes.

How to win: Can you solve the puzzle below? It looks very simple but it's only the start (most won't even try!). Each puzzle gets a little harder. But this time it's all up to you. Stay in to the end with the highest score and you win! Do you have what it takes? Try your hand and see.

Directions: Fill in the Mystery Word Grid with the correct words (going across) that spell out the Mystery Word down the middle. Hint: use the mystery word clue.

In the future: There will be four more puzzles at $2.00 each and one tie-breaker at $1.50. You will have three weeks to solve each puzzle (suspense is part of the game!). We don't know how many people will enter but typically 47% will advance through Phase I, 30% through Phase II, 25% through Phase III, and 20% through Phase IV. The tie-breaker determines the winner. If players are still tied they will each receive the grand prize they are playing for.

Mystery Word Grid



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ASK	TABLE	FIT	GAMES	THE
NEBULAR	RUNNING	CAPTAIN	TRILOGY	CARRIER
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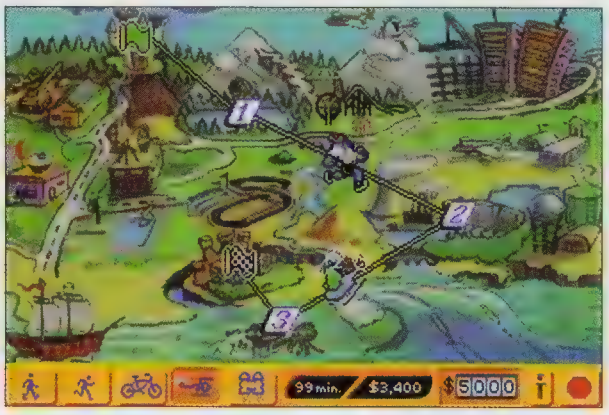
pop for children aged 9 to 14. Turbo Science plays like a cartoon and casts you as the lead character.

When you pair up with space elf Quarky O'Ghandi or his sister Quaysoo to form the Los Turbos team, you get to take on Das Liquidators, the Cool City Maulers, and Valiant Cubed in races around Elk Jaw County's 20 landmarks. During each challenge, TV sportsmeister Paco de Suave gives the play-by-play. Kids will especially enjoy post-game interviews, in which losers take cheap shots at winners and Quaysoo shares the nutritional secrets of her success.

Not only must you defeat the opposing team in a single game, you must play a series of games to progress through six levels before ultimately entering the Turbo Science hall of fame. Suffice it to say that Turbo Science fun doesn't end after just a few hours' play. Choosing easy or hard questions, you can customize the game for younger and older children. In fact, Turbo Science isn't just for the family room; it makes an enticing addition to a science classroom or school computer lab.



Scenes in Quarky and Quaysoo's Turbo Science feature clever animation and engaging sound effects.

At each pit stop in Elk Jaw County, you earn money by answering questions related to specific areas of scientific inquiry: aerodynamics, chemistry, electricity, energy, optics, and thermodynamics. After you secure appropriate funding (gee, this is beginning to sound like real science), you select a mode of transportation to help you zoom to the next checkpoint. Swimming from one location to another costs less money, but takes more time. Jet skis are faster, but more expensive. Keeping a close eye on the competition's progress can help you develop an economical strategy. From time to time Paco de Suave announces bonus-cash questions that can help you pull ahead of the likes of Bojo Orff, Iyam Nehverrong, and Odessa King.

Turbo Science's checkpoints are imaginatively designed and entertaining. In an offshore salvage mission, you learn about sonar and get to use the game's tools to measure pressure, temperature, and depth. In the Central City Clown College kitchen, you learn about physical and chemical change, volume, and formulas. And at the nuclear-research plant, you can help Speero Snodgrass build molecular models. Each scene — including a truly moving muscle-beach party — features humorous graphics images, clever animation, and engaging sound effects. Turbo Science's music is varied, too, ranging from polka to rock

The game's questions are in multiple-choice format. It might ask *Which creature uses sound to locate things under water?* The program draws three rectangles framing Ernie Eel, Charlie Octopus, and Cool Shades Dolphin. When you click on the correct object or character, the background scene fades while your teammate — Quarky or Quaysoo — performs crazy acrobatics in the foreground. Watching your space elf cavort, sashay, flip, or burst like bubble gum is a hoot. During their antics, Quarky and Quaysoo boost your self-esteem with messages such as "radical reasoning" and "you rule."

Some of the program's 2300-plus questions challenge you to use the Turbo Science virtual toolkit to find the correct answer. In the toolbox you'll find thermometer, scale, measuring tape, light meter, sound meter, voltmeter, and beaker. When a question asks *Which container holds 7 oz. of liquid?*, click on the tools button and select the appropriate instrument. You can take measurements in English or metric units.

ALWAYS LEARNING

Not sure about an answer? Call a timeout and solicit help from the 152-page Turbo Science Research Guide. The book icon in the game's button bar is cross-referenced to the page providing the correct answer. If you eschew the guide and goof, you lose points to some smarty-pants kid who has all the answers. When you click on the button picturing nerdy Quentin Dweebul, he points to the correct answer on screen.

To no one's surprise, the game runs noticeably more slowly on PCs with a 386SX microprocessor, the minimum required, than on newer systems boasting a 486 chip. Several seconds' delay between scene changes on slower machines doesn't ruin the fun, although a faster processor makes Turbo Science live up to its name.

If you're 9 to 14, you're a cool dude or dudette — and you expect no less from the games you play on your PC. Quarky and Quaysoo's Turbo Science couldn't be more radical. The game features gold-medal graphics images, awesome animation, rad music, and gazillions of sound effects.

And guess what? There may be hope for Barbie and G.I. Joe. Turbo Math, a sequel to Turbo Science, is on its way. Totally. ❑

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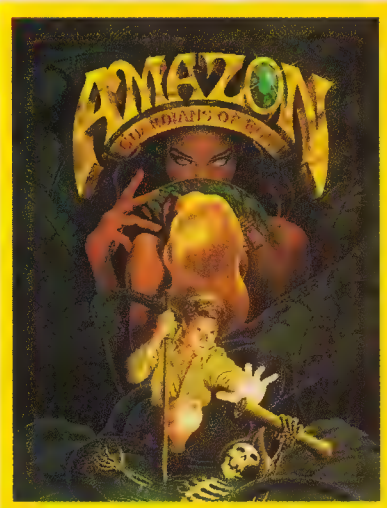

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SPACE OPERA EXTRA-ORDINAIRE

By Bernie Yee

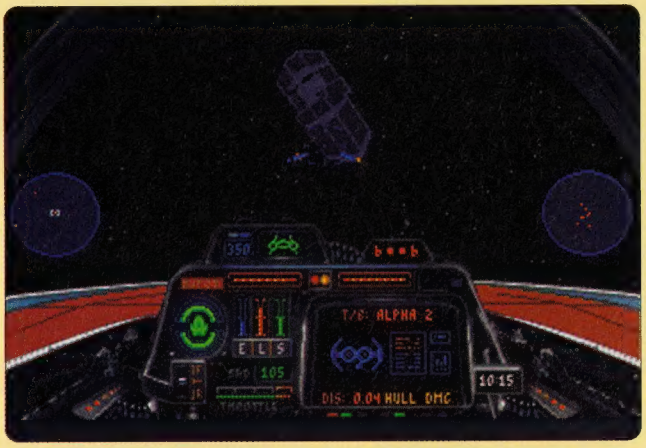
Lots of space-flight simulators, such as Origin's Wing Commander, evoke memories of those wild dogfights we saw and loved in *Star Wars*. So what's so special about **X-Wing**? This new title is from LucasArts itself, and it *is* a *Star Wars* dogfight. But concept alone can't carry a product; LucasArts had to put together a simulation that lived up to that seminal space opera. Fortunately, Luke Skywalker himself couldn't have been more on target.

IN A GALAXY FAR, FAR AWAY . . .

If you've got a sound board, X-Wing greets you with John Williams' award-winning soundtrack. The familiar scrolling text fades into infinity, and you'll be treated to other scenes you loved in the movie — huge Star Destroyers looming ominously in the foreground, gaunt bony-faced Imperial commanders bent on genocide, and a scrappy band of freedom fighters tending to their ships. With digitized speech, the opening sequence is like watching bits from a previously unreleased episode of *Star Wars*.

The action in X-Wing begins on a Rebel star cruiser, where you can sharpen your flying skills by zipping through a difficult maze or practice flying various historical missions in which you see how well you would have done in the Alliance's most-important victories. Taken together, these training sessions help you find your space legs and become familiar with your weapons and your wingmen (who seem smarter than Wing Commander's sidekicks). When you think you're good enough, you can go off on your tour of duty.

Actually, X-Wing is something of a misnomer, for you can fly X-wing, Y-Wing, and A-Wing fighters.



X-Wing brings Star Wars to life on the small screen, with impressive graphics, exciting special effects, digitized speech, and plenty of riveting action.

The simulation's graphics images are impressive — maybe even overwhelming. Polygon graphics may reduce detail (compared to something like Wing Commander, which uses bit-mapped images), but provide a payoff in smoother animation with no sudden image shifting. You can soar down onto the surface of a larger ship, strafe, and pull up through a fireball with astounding grace. A good joystick, like CH Products' Flightstick, helps immensely.

Explosions are bit-mapped images, though, as are other dazzling effects, such as the blazing green laser blasts from spinning incoming TIE fighters.

Sound effects throughout X-Wing are ripped right from the movie: You'll hear the TIE fighters' roaring whine, the X-Wing's lasers, proton torpedoes, the R2 unit's beeps and whistles, the great branching theme music. All re-create the thrill of the film.

OBE WAN THIS ONE

Game play in X-Wing is amazingly true to the technology seen in George Lucas' movie series. You can double your forward shields at the cost of your rear shields (remember the command in the original movie to "switch your deflectors to double front"?); the targeting display and cockpit are reminiscent of the original film details; and your on-board R2 is always there to lend a hand in repair or to remind you of your mission objectives.

Documentation is adequate and includes a glossy book chronicling the trial by fire of a novice X-Wing pilot, complete with a "historical" outline of the fall of the Old Republic and the rise of the Emperor and his dark minion, the Sith Lord Darth Vader. Borrowing generously from movie stills and drawings, the documentation is a good primer on the *Star Wars* universe, but isn't as compelling or as informative as the paper provided with the first Wing Commander.

Software simulations of space dogfights were defined by the *Star Wars* trilogy, and X-Wing re-creates that feel successfully. In fact, the inevitable expansion scenario disks are already planned. I haven't looked forward to a sequel this much since . . . well, since *The Empire Strikes Back*. X-Wing — buy it. ❑

1 2 3 4 5 6 7 8 9 **10**

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